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Manufacturers' Record.

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BALTIMORE, JULY 12, 1906.

RESPECT-SAPPING "PHILANTHROPY."

In discussing the plans of the Carnegie Fund for pensioning teachers the *Watchman* of Boston calls attention to the fact that the trustees of that fund have not yet made out any list of institutions the teachers of which may be assisted or pensioned by this fund, and then it adds:

We have learned of some colleges, founded and long fostered by religious denominations, which, in seeking to become eligible to the benefits of the fund, have hastened to deny denominational affiliations.

What else could be expected under a system which makes money-getting the supreme end of college work, which trains teachers and scholars alike to be mendicants, which in substance says to the professors of all American schools, "We have \$10,000,000 in hand the income of which will be settled on the teachers whom we approve who teach in schools we approve?" In this day when mendicancy and beggary are made respectable, when self-reliance and independence of thought and action are no longer counted as virtues, what a mighty power—shall we say what a mighty bribe—to influence all educational work becomes this \$10,000,000, affiliated as its managers are with many other millions for similar work! Under such circumstances who can expect honesty of investigation and honesty of work in teaching if these be contrary to the views of those who hold the vast power of those would-be financial educational magnates? No wonder the bribe was sufficient to tempt some colleges to deny their denominational affiliations! No wonder some teachers, realizing that

the way of the beggar is made easy and very respectable in these days, have sought to have their schools accepted by the trustees of the Carnegie Fund in order that, harmonizing with the views of these trustees, they might be eligible to secure the benefit of this charity! There were times when men were taught that to be beggars was beneath the dignity and manliness of any man who had strength of body or mind to earn his own living, but these times seem to have passed away.

Advertisements of Southern localities offering special advantages for the location of manufacturing enterprises will be found on pages 64, 65 and 66.

STEEL CARS.

A dispatch from Topeka states that the management of "the Union Pacific Railroad and other Harriman lines, after experiments extending through a long period of time, have adopted steel for use in the construction of all passenger equipment, of all box cars, and, in fact, of all cars which will permit of such construction." The attention which has already been given to the steel passenger cars recently built and the success of steel freight cars has tended to show that in the near future steel will practically entirely supplant wood for passenger-car construction. Its safety in case of accident or of fire and the durability are so strongly in its favor that the development of steel passenger-car building is likely to have something of the same rapidity of growth which has marked the steel freight-car business.

Thus another new use for steel has opened up, and new uses and expansion of old uses are growing so fast that the entire steel industry of America is being taxed to its utmost capacity to meet the demands. In fact, the furnaces and steel works of this country are now running under such a high pressure that there would be danger of the demand far outrunning the possible supply were it not for the fact that the great steel-making concerns are expending vast sums for the enlargement of old plants and the building of new ones. While we may have ups and downs in the trade as heretofore, it is quite certain that this industry will continue to expand far beyond anything that we have yet seen.

ADVERTISING BOSTON.

We cannot speak too highly of the wisdom displayed by the city fathers in Boston, who have appropriated \$50,000, and taken steps to secure a like amount by popular subscription, for the laudable purpose of developing their city by means of printers' ink. Imbued with the belief that advertising is good for individuals and corporations engaged in business, they have wisely concluded that Boston's industry and commerce can be increased by a resort to the accredited channels of publicity. This is not by any means an initial or a pioneer movement. Many cities and towns throughout the Union in recent years have added to their growth through advertising. Such publicity attracts outside capital, which, in turn, strengthens the community, gives an impetus to industry and in-

creases its general prosperity. When Mayor Fitzgerald assumed office he voiced a demand for "a Greater Boston." We feel that his hopes in that direction will now be realized, for advertising is the keynote of commercial success today, and the individual, corporation or municipality that seeks returns without its aid is merely wasting effort.—*Wall Street Journal*.

The *Wall Street Journal* is right. Advertising is the keynote of success in nearly every business, whether that business be the development of a State, a city or an individual industry. Boston's proposition to spend \$100,000 in advertising is more than matched by St. Louis, which expects to spend several times that amount in general advertising. The South is seeking immigration and new industries, and yet most Southern legislatures would regard an annual expenditure of \$10,000 to attract immigration as bordering on wild extravagance, but Cuba wants immigration, and does not need it one-half so badly as the South, and its Congress has voted \$1,000,000 to be expended in that work. A few days ago a Florida planter came into the office of the *MANUFACTURERS' RECORD* to inquire whether he could be directed to any source from which he could secure farm laborers. "My plantation," said he, "produces only about 100 bales of cotton annually, against 400 bales before the war, simply because of the lack of labor to cultivate it." From a truck-grower in the same State comes a similar appeal. In fact, everywhere throughout the farming regions the cry for labor is as pronounced as in the factories and mines. Landowners are begging for men to cultivate their idle property, furnaces and mines are running far short of their capacity because workers are not to be had, cotton mills are consuming half a million bales less than they would be using if they could put their idle spindles and looms to work. And yet while the South is doing much talking about these needs, it is really doing but little active work. The State which needs laborers must follow Boston's example and be ready to spend liberally to get them. The average man would think that certainly Boston, with its vast wealth and its great industrial interests (the factories within the city limits in 1900 exceeding in capital the aggregate manufacturing capital of Georgia and Alabama in the same year), would hardly need to advertise, but the spirit of New England knows no limit to its activities, and to this spirit is due the wealth and industry of that section. Surely in this good work Boston could be profitably imitated by every State and every town in the South, and likewise by every business man in the land.

GREAT DEMAND FOR LOCOMOTIVES.

The immense demand for railroad motive power is shown by the greatly-increased output of the various locomotive builders. A report from Philadelphia, for instance, says that the Baldwin Locomotive Works for the first half of 1906 turned out 1311 locomotives,

breaking all previous records for an equal period. This makes 2500 locomotives built at Baldwin's since July 1 of last year, and if the rate of production for the first half of 1906 is maintained there during the remainder of the calendar year the output for the 12 months ending December 31 next will be 2622 engines, or at least 350 more than were built in 1905, which was a record-breaking year at those shops. The American Locomotive Co. is also doing a heavy business, and it is probable that the total American output of locomotives this year will be considerable more than 5000. Baldwin's is said to be employing the largest force of men ever known in its history, the payrolls carrying 21,245 names, divided thus: 17,745 at the Philadelphia plant and 3500 at Lewistown.

The output of locomotive works is one of the best barometers of our railroad business, being equalled in this way only by the output of the car factories, which are also crowded with orders. The average size and capacity of locomotives is considerably greater than it was 10 years ago and is still increasing, but it is probable that the demand for them will continue to grow indefinitely, as the railroad business is expanding everywhere, and particularly in the South and Southwest, with most rapid gains. Moreover, the activity of transportation is putting heavier strains upon the motive power of our railroad companies, and engines are worn out in service much more rapidly than formerly. The average life of the locomotive has been recently reckoned at 20 years, but in all probability this estimate must be reduced as a result of experience. American railroads use their motive power in a much more practical manner than do the railroads in Europe. In this country no money is wasted for unnecessary attachments or ornamentation, whereas on the other side of the Atlantic the usual practice of the builders is to paint and gild their engines, while the railroad companies endeavor to maintain them in a spick and span appearance. This beautifying process is, of course, secured only at considerable expense, which American operating railroad officials would consider mere waste of money. Locomotives are here bought for service, and they are worked hard until repairing them is no longer economical, and then they go to the scrap heap.

The great and growing demand for locomotives thus manifested should result in the establishment of another locomotive works in the South. In fact, there has recently been talk of establishing a factory at Baltimore, which was the location of one of the earliest locomotive builders in America, the firm of Gillingham & Winans being noted for their engines 50 or 60 years ago. As yet, however, the reported new plant has not materialized, but the inducements of the business of manufacturing locomotives are apparently so attractive that the establishment of a new factory either at Baltimore or some

other Southern city may be expected at no distant day as a matter of necessity.

ENCOURAGING TEXTILE GRADUATES.

The MANUFACTURERS' RECORD regrets to learn that in some cotton-mill plants in the South there is more or less prejudice against the graduates of textile schools. This is not the fault of the graduates, who ask no special favors, but only seek the privilege of entering the industry at the very bottom, if need be, and on an equal footing with others. Nor are the millowners responsible for the difficulty except in so far as they permit themselves, in estimating the value of the graduates, to be influenced by superintendents or overseers. Naturally the millowners, not actively managing all departments of the business, must depend largely upon the judgment of their superintendents or overseers, and they may sometimes overlook the fact that the latter, having learned the textile business, often under great handicaps, are convinced that the business can be learned in no other way. The great majority of such men are fully competent to fill their positions, but their advancement, the result of steady perseverance, has been much slower than would have been the case had they been fortunate enough to enjoy special training before they entered the mill. Some may have honest doubts of the efficiency of the textile-school graduates. That has been so in other lines. For example, many a successful newspaper worker of today may readily recall the time, not so long ago, when, in the average newspaper office managed by men who had risen from the printers' case to editorial positions, the college graduate was hardly tolerated and was usually regarded as a sort of inferior being. To be sure, too many college graduates of that day with journalistic ambitions imagined that ability to turn an English sentence cleverly added to a vast store of bookishness was all that was necessary for them to duplicate and better careers like those of a Dana, a Greeley, a Prentice or an Abell, and were prone to view with contempt their new associates who had been pretty thoroughly dosed with printers' ink, but whose gifts were of the best sort, in that they had been acquired in the school of hard experience. That antagonism has largely disappeared with the entrance into journalism of men who had not permitted a college course to sap their common sense and who were anxious to apply to any task about the newspaper the knack given them by proper college training, and with a realization on the part of the printing-house graduate that such a knack may be given by a college course, and that in the case of two men of equal natural abilities the race will be to the one who has what may be called the college-knack. So, too, in farming, it has been difficult for many a "practical" man following faithfully the routine of his father and his grandfather to understand that the records of the experiences of many farmers, their failures and their successes, assembled and handed on through the printed page or in college lectures, added to personal experience with plants, soil and animals—in brief, college training in agriculture—gives one an advantage over the merely ancestor-trained. But that spirit is weakened under the influence of intelligent use by hundreds of thousands of farmers of the results of scientific work done at State experiment stations or at Washington under the

immediate auspices of the Agricultural Department.

Of course, as in other fields, where men not satisfied with their own success attempt to keep down others, or, cognizant of their own weakness, fear replacement, the temptation is great in the textile industry to repress the better trained. That is pure human selfishness, which is open to no argument; but men who are honestly acting upon the erroneous conviction that the textile graduate will not do in the mills should give sober thought to the following statement made by one of our correspondents:

The future of the cotton industry depends to a great extent upon the educated men of the South. The MANUFACTURERS' RECORD has time and again lamented the fact that so few of our brightest and best educated men enter the industry. Now that the textile schools are beginning to supply this type, we find this barrier of foolish prejudice standing in the way. * * * We believe that the MANUFACTURERS' RECORD can point out these facts to the millowners, and that they, in turn, will be quick to appreciate the benefit that will result from the employment.

There is a suggestion here not only for the managements of cotton mills, but for the masters of all industries in the South. There is a limit to what may be regarded as the natural advantages of the South as a cotton manufacturer. When that limit is reached the industry must decline, unless in the meantime the advantage of skilled labor and of specially trained leadership has been added. That is to come through the textile schools. If the manufacturers of the South do not propose to be liberal in support of the institutions that will give the South the industrial skill and training required for it to keep pace with other manufacturing sections, and to be equally liberal in keeping open opportunities for the graduates of such institutions to put their training to best account, they might as well cease to expect the natural advantages of the South to be fully enjoyed.

WHY NOT GROW RAILROAD TIES?

While experiments are here and there being made with steel or steel and concrete railroad ties, the movement to introduce metal into this portion of railroad-track construction has made but little headway, and the demand for wooden ties is growing every year. To meet this demand an exceptional opportunity is presented to lumbermen in the South, thus: Each year they are clearing up large tracts of timber land which is either adopted for farming purposes or else left to be renewed in timber by nature's own processes without the aid of man. If on these cleared areas young, quick-growing trees were set out the timber lands would be preserved and a future supply of ties would be assured, provided that the railroads generally adopt the use of preservatives for wooden ties in order to prevent the rapid decay which now causes such large numbers to be purchased for renewals every year. The South is, perhaps, better fitted to devote large areas to the growth of timber for railroad ties than is any other part of the country, but principally for two reasons, one of these being the possession of much territory better adapted for the growth of timber than anything else, and the other being its long summers and mild winters, which produce rapid growth of all vegetable matter.

Last year the steam railroads in the United States used about 85,000,000 cross-ties or about 3,000,000,000 feet of lumber, board measure. Considering

the demands of electric and other railways besides steam lines, it is safe to say that the annual consumption of ties in this country is somewhere between 90,000,000 and 100,000,000. Although this enormous demand exists and increases year by year, the railroad companies have done very little, so far as forestry experiments are concerned, to meet it. The Illinois Central, the Louisville & Nashville, the Pennsylvania and perhaps two or three other railroad companies have set out some trees, but the total number planted is very small as compared with their demands, and the production of ties to come from these groves will be so limited as to hardly amount to a drop in the bucket, or, more properly writing, to one stick in the woodpile. The railroad companies generally appear to be drifting along so far as future supplies of timber are concerned and trusting to luck to provide them. Indeed, their seeming indifference to the tie problem reminds one of the squatter in the old story of the Arkansas Traveler, who didn't mend his roof when it leaked because it was raining and who didn't mend it when it was dry because it didn't leak. It may be that the railroads are hoping that someone will discover an adequate answer to the tie question before ever the time comes when it will not be possible for them to obtain a sufficient supply of even inferior woods to meet their requirements. But before all this stands the stern fact that unless the cultivation of timber is entered upon systematically and with great forethought, the supply of lumber for ties, telegraph poles and various other corporate purposes will fall far behind the demand.

In the South pine, oak and cypress are used for ties, with some chestnut, some hemlock and a little of other woods. Catalpa has been tested and found satisfactory, and at least two railroad companies have set out catalpa trees to aid in supplying them with ties some years hence. The South used about 14,000,000 pine ties last year, or 81 per cent. of the total of pine ties used in the entire country, besides about 13,000,000 oak ties, or 33 per cent. of the total, and more than 3,000,000 cypress ties. Pine ties have proved satisfactory and when treated with preservatives last for many years, and their life of usefulness could be prolonged if tieplates were generally employed to prevent the cutting of ties by the rails in service. Some experts in railroad construction incline to the view that tieplates must be adopted for economy's sake, and it is said that their use is at its best when they are fastened with screw spikes. They are also made heavier than they were when first tried, as the metal then employed was too thin and bent under the pressure of trains. Wooden ties when treated with creosote or other preservatives will last about three times as long as untreated ties, and their use combined with the tieplates may, it appears, do more toward establishing a balance between the demand for ties and the supply of them than almost anything else, although even with these economies the cultivation of timber for tie purposes must be undertaken.

If the railroad companies continue to show such apparent indifference to the question of providing for tie supplies in the future, should not the lumber companies avail themselves of the opportunity that is presented to them and enter upon tree-planting as fast as they clear their tracts? Such a course of procedure would seem to be excellent

business policy. The lumber companies have the land which is suitable for the cultivation of forests and they could plant so that the growth would be much more rapid than it was when nature was unassisted by the discretion and discernment of man.

THE PRICE OF COTTON.

European cotton manufacturers have been in convention considering all phases of their trade. One of the interesting developments of the gatherings is the statement credited to Mr. Charles W. Macara, chairman of the committee of the International Federation of Master Cotton Spinners and Manufacturers' Associations, to the effect that the minimum price, 10 cents a pound, desired by American growers, while exceedingly profitable to the growers, will not be a cause of grumbling by the users, and that he believes that the strong financial position of the American growers, enabling them to hold their cotton, will have an important influence in steadying prices. There seems to be in this a recognition of the strong position which the American growers may maintain for themselves by wisdom. When manufacturers and growers approach an agreement as to the fair minimum price for the staple the cotton industry in all its ramifications is in a fair way toward a stable situation for the benefit of everybody legitimately interested.

THE LABOR SHORTAGE.

Richmond, Va., is one of the many Southern cities feeling keenly the need of labor. There is great activity there in construction work of all kinds and in the many industries which are adding to the city's importance as a manufacturing center, but on many sides are heard complaints of a shortage, both of skilled and unskilled workmen, of a rivalry among establishments to secure hands sufficient to do the waiting work and of unwillingness of capable workmen to do their full stint or to work at all. It is reported that some industries are willing to offer premiums for workmen. In a certain sense such a situation is in the main exceedingly gratifying as indicating great strength in Southern industry. But at the same time it reveals a weakness which must be overcome if the South is to do its best. The weakness lies in the fact that at the moment the South's opportunities are beyond its ability to avail itself of them adequately. The weakness can be overcome only through immigration.

THE INLAND WATERWAY.

Friends of the project for an inland waterway along the coast of the United States from Massachusetts to Texas feel encouraged in a belief that upon the re-assembling of Congress a report favorable to the construction of the important link between Norfolk, Va., and Beaufort Inlet, N. C., will be made by the board of engineers having that plan under special consideration. Progress upon the route through Texas and Louisiana, connecting the Mississippi and the Rio Grande and a vast network of rivers is reported, and there is a lively interest in New England, New Jersey, Delaware, Maryland, Florida, Alabama and Mississippi and other States in plans, some of them dating back many years, for the construction of coastwise canals or cut-offs between great estuaries of the Atlantic, all of which fall in with the big project.

THE COTTON MOVEMENT.

According to the report of Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, the amount of cotton brought into sight during 10 months of the present season was 10,653,949 bales, a decrease under the same period last year of 2,085,601. The exports were 6,239,361

bales, a decrease of 1,806,668. The takings were, by Northern spinners, 2,281,161 bales, an increase of 81,463; by Southern spinners, 2,062,959 bales, an increase of 95,784 bales.

SOUTH CAROLINA.

Commissioner E. J. Watson of the department of agriculture, commerce and immigration of South Carolina has done a splendid piece of work for his State in publishing a quarto bulletin of 32 pages setting forth a mass of facts which will be found exceedingly valuable by anyone seeking a home or an investment in South Carolina. An introduction dealing with manufacturing as a whole and special industries with general agriculture and with truck-growing, with mining, education, population, etc., is followed by statistics comparing conditions in the State in 1900 and 1905, and thereby revealing a gratifying progress on many lines. There is, besides, a profusion of half-tone illustrations of what South Carolina is doing in the field, in the factory, in the orchard, in the quarry, in the timber districts and by the waterside. The department over which Commissioner Watson presides is actively at work upon a handbook of the resources of South Carolina to be issued at the beginning of 1907. This bulletin whets the appetite for additional information to be embodied in the handbook.

PORT ARTHUR, TEXAS.

The act of Congress of June 19 making Port Arthur, Texas, a port of entry calls attention to the rapid progress made by commerce at that port. In 1901 23 vessels, with a tonnage of 33,211, carried from Port Arthur \$1,900,699 worth of goods. In 1905 379 vessels, with a tonnage of 647,582, carried out \$14,826,110 worth of goods. Twenty-eight ocean-going ships are owned in Port Arthur. It has a safe and convenient harbor with practically no current, and the ship canal connecting it with Sabine Pass is 25 feet deep and 183 feet wide. It has a population between 5000 and 6000. Its property is assessed at \$3,000,000, not including industries just outside of the city's limits. It has two banks and more than 4000 linear feet of general-cargo docks. The Kansas City Southern Railroad is directly connected with the docks and the Southern Pacific goes into West Port Arthur, from which point its tonnage is switched over the Kansas City Southern to the docks.

TO LOOK FOR SETTLERS.

Mr. P. M. Paley of Little Rock, Ark., will leave that city about the middle of this month to investigate for the Little Rock Board of Trade conditions in Germany and Italy with a view to securing for the section of Arkansas immediate to Little Rock desirable immigrants to engage in agriculture, and particularly truck-farming and fruit-raising.

The Birmingham Iron Co., recently reported as having been organized to take over the properties formerly owned by the Tutwiler Coal, Coke & Iron Co., has made a mortgage to secure \$2,000,000 of 5 per cent. bonds with the Knickerbocker Trust Co. of New York as trustee. This company and the Birmingham Coal Co., also recently organized with a capital of \$1,000,000 and with an authorized issue of \$1,000,000 of bonds, are owned or controlled in the interest of the Atlantic & Birmingham Construction Co., which is building the Atlanta, Birmingham & Atlantic Railway. \$2,000,000 stock of the iron company and \$1,000,000 stock of the coal company are deposited as a part of the collateral to secure the collateral trust four-year notes recently issued by the construction company.

Vim and Vigor in All Lines at New Orleans.

[Special Correspondence Manufacturers' Record.]

New Orleans, La., July 5.

Not having been in New Orleans since the yellow fever visitation of last year, I was altogether unprepared for the vim and vigor which I find universally prevalent here in all branches of business, and for the spirit and enterprise which are shown by all the people. Having knowledge of the slow recovery which the city made from the last visitation of yellow jack in epidemic form, in 1897, I had hardly thought New Orleans would rebound from the epidemic of 1905 with such instant recovery and such acceleration of movement that at this time, a year after the outbreak, it would be difficult to see how more activity could have occurred had there been no interruption at all.

As a matter of fact, there is evidence conclusive that the ancient enemy of continuous development here has had his hideous fangs removed, and as a producer of panics old yellow jack is to be hereafter hardly more seriously regarded than is the worn-out dragon of an extravaganza company innocuously reposing in the property-room of a theater. He is off the stage, and for good, it would seem. The absolute demonstration of the fact that through the stegomyia alone can yellow fever be communicated, and the splendid heroism and superlative capacity which the citizenship of New Orleans displayed in conquering the epidemic last year have robbed the yellow fever of its chief element of terror, and instead of a mysterious demon, moving in unknown ways and striking with blind and unaccountable fury, there has been revealed a disease more fully controllable and less to be feared than is pneumonia, and one which may hereafter be counted on to cause fewer deaths in New Orleans than does typhoid fever in New York, Pittsburg or Washington.

It would be unprecedented if there are no cases of yellow fever in New Orleans following the outbreak of last year. However, all the machinery of the health authorities, city, State and national, is in trim to cope with the disease if it should break out, and with present vigilance and the knowledge born of last year's successful fight there is no fear of an epidemic. If there should be cases which elude quarantine inspection in the lower river and the Gulf, they will be given the treatment their condition requires, as would a patient suffering from typhoid, appendicitis or a fractured thigh, and there will be hardly more excitement among the people or a much greater fear of contagion.

After 1897 the business of the railroads was very slow to return to a normal basis, and real estate was stagnant for some time. Last year the railroads came back to customary earnings almost on the lifting of quarantine, and real-estate values hardly had a dent. Property never was so strong in value as it is today; there never were so many new buildings and improvements under way as now, and there is a fever of railroad construction. Not only are new lines being projected all about, but every railroad in the South not already having terminal arrangements here seems determined to get into this port with the least possible delay.

There is talk of a union bridge across the Mississippi at Baton Rouge that would be used by the Southern Pacific, Santa Fe, Rock Island-Frisco and Gould roads, all of which are at present constructing through Louisiana connecting lines such as would make this project entirely feasible. The Louisiana Railway & Navigation Co., the Edenborn road, is in operation between Shreveport and Naples, near the Mississippi river; less than 30 miles of track into New Orleans remains to be

laid, and it is expected that regular trains will be running over the entire line before the end of the year. The M., K. & T. is credited with a plan to get into New Orleans via this enterprise. The Kansas City Southern is understood to be back of the Central Railroad of Louisiana, now under construction from Leesville, on the Kansas City Southern, to a point on the Mississippi river opposite Westwego.

With the roads already operating into New Orleans over their own lines or through trackage arrangements, New Orleans will thus have every important line in the Southwest and Middle South except the Southern, and the extensive interests and further developments being made by that road lead to the conviction that sooner or later the Southern will run its own trains into this city.

In addition to these roads, there is a general standardizing of the lumber roads of this section, which suggests their probable utilization as links in systems later on. The New Orleans & Great Northern, a project of the Goodyears of New York, who own 1,000,000 acres of long-leaf yellow pine in Louisiana and Mississippi, is surveyed from Slidell to Smith's Ferry, 101 miles, with Jackson, Miss., as its objective point. Trains over this road are expected to be run into New Orleans at an early date. The Hammond Lumber Co. is building a line east from Hammond towards Covington. Another lumber road that has developed into a standard road is the Brookhaven & Pearl River road, another Goodyear enterprise, which is running regular trains with fine equipment between Brookhaven and Hattiesburg, and is reported to be heading for Pascagoula.

Numerous additional lines have been chartered, and either on their own motion or as parts of other systems may be pushed to completion.

In New Orleans enormous expenditures are being made by railroads for increased terminal facilities. While the Rock Island-Frisco interests have halted in their plans for a million-dollar passenger station at Basin and Canal, and talk of a \$300,000 building is now being heard because the city refused to vacate some streets that stand in the way of the greater improvement, it is deemed likely that the whole enterprise may be only held up temporarily, pending a reconsideration of the city's attitude, and that when final plans have been adopted the larger improvement will be the one to be carried through. However that may be, these interests are in the very midst of the expenditure of \$2,500,000 on the freight terminals at Chalmette. In the name of the New Orleans Railway Terminal Co. the Frisco-Rock Island and the Southern Railway, dollar for dollar, are spending \$2,500,000, in addition to what they paid for the properties, to make Chalmette one of the finest freight terminals in the railway world. There a basin is being constructed with concrete walls. The basin will be over 1600 feet long and 300 feet wide, with a water depth of 30 feet opening into the river. It will have concrete wings. From six to eight oceangoing ships can harbor there at a time. There will be double-deck warehouses on each side of the basin, so that cars will be pushed right into the upper stories and from there receive or discharge their cargoes. This improvement will be completed within a year.

The further increasing importance and development of New Orleans as a port, which would apply even were the Panama canal not a project of definite shape and incalculable stimulus, is assured by the work on the jetties at the Southwest Pass, which will be finished in a year, and which

will give 35 feet of water across the bar, allowing ships of the heaviest draft afloat to come fully laden up to the very wharves of the city.

That there is a large and general awakening as to the importance of the position New Orleans is to occupy among the seaports of the world is shown in the investment and building activity seen on every hand. Figures are given demonstrating that never in the history of the town has there been such an enormous building activity, nor has there ever been so widespread an appreciation of New Orleans realty. Building operations now under way show an aggregate of nearly \$14,000,000, in addition to the \$15,000,000 to \$20,000,000 being expended for the sewerage, drainage and water-works systems voted for and inaugurated a number of years ago. Five million dollars or so are to be spent on new hotels, for so great has become the travel to New Orleans during a large portion of the year that the present hotels are wholly unable to handle the business at all times. While the New St. Charles, under the management of Col. A. R. Blakely, has undoubtedly been a most potent factor in popularizing New Orleans as a winter resort, and has had much to do with making New Orleans what it is today, it is declared that this has ceased to be a one-hotel town. It is the belief here that the new hotels under construction will have an experience similar to that of the new hostleries in New York and other large cities, and that in the end there will be so great an increase in hotel patronage that not only will all the hotels be taxed to their capacity, but still other new ones will be required to take care of the increasing tide of travelers.

The principal new hotel enterprise is to have the name Audubon. Including the ground, this is to be a \$3,000,000 enterprise. It will be 15 stories high, of marble exterior, and will run through from Canal to Iberville at Dauphine. Announcement is made that no hotel in the country will have better appointments.

The new Denechaud Hotel, on Baronne street, running through from Perdido to Poydras, will be finished by the first of the year at a cost of \$500,000, and the addition to the Grunewald, extending from the present Grunewald on Barrone to Dryades, will, when completed within the next two years, represent an investment of about \$850,000.

These and other new hotel enterprises indicate in a manner perhaps more forcible than anything else could the faith in the immediate and continued growth of the city.

A dry goods company is building a new 15-story structure; plans for a million-dollar courthouse have been adopted; a \$3,000,000 sugar refinery, the finest in the country, is under way; the Louisiana Canal Bank is putting up a nine-story building that will cost \$750,000; a new theater, music hall, etc., are among the buildings under way. The improvements include business buildings, warehouses, residences and all manner of structures, and are to be found all over the city, in whatever direction one may turn.

Instances are numerous which show the steady increase in values of inside property, and the operations of companies owning outside tracts tell an even more significant tale. The Greater New Orleans Realty Co. owns a compact body of 500 vacant acres north of the City Park, in the proximity of the new racetrack. The company laid out 70 acres, creating boulevards, avenues and shell roads, and as soon as the system of city water and sewers are completed the service will be extended to the property. Trees have been planted along the streets—magnolias, oaks, cape myrtles and palms—and there are restric-

tions which keep out undesirable people. The tract is two and a-half miles from the St. Charles Hotel, and it is significant of the trend of development that lots are being sold in this tract at the rate of \$12,000 an acre that cost the company \$1000. Such lots as have been sold have been bought for improvement, and on one of them a \$25,000 residence is to be built. This company, it may be incidentally mentioned as of interest to others of its kind, has adopted a policy of investing the proceeds of its sales of vacant lands in revenue-producing commercial properties located on the principal downtown streets of New Orleans, among which is the first apartment-house New Orleans has seen. The immediate occupancy of all the apartments in this building demonstrates the unfilled demand for such structures in New Orleans. The fact that this company's stock has increased more than 100 per cent. in value within a year shows also the opportunity for operations in this field.

At present there is under discussion a plan to merge this company with the New Orleans Land Co., which owns 2600 acres, and whose holdings, with those of the Greater New Orleans Realty Co., would include all the lands between the City Park and Lake Ponchartrain, and from Bayou St. John to the upper city limits on the east. The New Orleans Land Co. has let large contracts for drainage and development, and the entire holdings of the company are to be put in shape for improvement by individual purchasers. Under one management this would become one of the greatest land-development enterprises in the country.

The activity in suburban realty here is further demonstrated by the operations of the New Orleans & Ponchartrain Realty Co. and of the Highland Realty Co. These companies have acquired good-sized tracts of outlying lands, and contemplate their development.

No slump having occurred in real-estate values during the yellow fever year, but instead an increase being noted all over town, there will undoubtedly be a marked upward movement in the fall should the summer pass without any serious recurrence of the fever.

The banking business of New Orleans is another barometer of trade conditions and public confidence. During the past year several new banks have been formed, the newest of which is the Colonial Bank & Trust Co. Starting with a capital of \$240,000 and a paid-in surplus of \$60,000, shares were offered at \$12.50—\$10 par and \$2.50 surplus—and were oversubscribed six times. While the personality of the officers and directors may have had a good deal to do with this oversubscription, it is a fact eloquent of financial conditions here. Geo. G. Friedrichs, a well-known and very successful real-estate operator, is president of the bank; Sam D. Baker, recently of Natchez, is cashier, and the directors are all business men of New Orleans. The bank was formed with the principal object of taking care of the business of the retail merchants of the city. There are \$300,000 of deposits, the bank owns its own building—one in which the phenomenally successful New Orleans National Bank began business—and a prosperous career seems assured the new institution.

During the year there has been a marked addition to the industrial institutions of the city, new establishments including the first rice elevator in the South, new Portland cement works, cordage factory, boat-oar factory, tannery, enameling works, gasoline-engine works, flouring mill (the first in the city), Pintach-gas plant, shipyards, etc. In addition, a number of Northern manufacturers not heretofore

represented here established branch houses and sales agencies.

New transportation facilities include additional coastwise and foreign steamship sailings, and in every feature of development an activity is to be noted along lines that mark the steady progress of New Orleans toward its manifest destiny as one of the great seaports of the world.

ALBERT PHENIS.

CHARLESTON IS SPREADING.

Real-Estate Developments in West Virginia's Capital.

[Special Cor. Manufacturers' Record.]

Charleston, W. Va., July 9.

Based on an ever-present dearth of residences, a scarcity of sites for factories and for homes, and an important development of industries here, immediate and prospective, a number of realty companies have been organized in Charleston with the object of meeting these demands.

There is unbounded faith in a great future for this place, with its practically inexhaustible supply of steam and gas coal, its great supply of natural gas, its oil and timber resources, and its railroad and river navigation facilities. Already there is the greatest axe factory in the world in Charleston. The Baldwin Steel Co., maker of crucible steel for high-speed tools that stand the test anywhere, is building on its new site, and will have its plant in operation here by the first of the year. There are car works, dyers' extract works, foundry and machine shops, boiler works, furniture factories, veneer works, etc., and negotiations are under way for a number of new enterprises of the first magnitude and importance.

To provide sites for shops and homes for workmen it has been found necessary to lay off additional ground. One of the first companies to undertake this work is the Kanawha Realty & Manufacturing Co., which owns a tract of 112 acres on the south side of the Kanawha river adjoining the property of the Tanners & Dyers' Extract Co., and extending back to the hills on the south. Twelve acres of the bottom lands which this company owned were acquired by the Baldwin Steel Co. The concrete buildings of this company are now under construction, and it is the calculation that the plant will be running by the first of the year. The Charleston street-car line will be extended into this property and further down the river, so that a new section will be brought practically within the business district of Charleston. On the lands sloping back from the factory sites of this property a number of residence lots have been laid out. They will be required for the workmen to be employed in the steel works, and can be utilized as well by the employees of the Tanners & Dyers' Extract Co., none of whom at present make their home in the vicinity of the factory. As residences are always in strong demand in Charleston and pay a very excellent dividend on the investment, it is expected that a large number of the lots in this addition will be improved for the use of workmen in these industries. In addition to the Tanners & Dyers' Extract plant and the Baldwin Steel Works, it is certain that other industries will be located in this vicinity.

Further down the river a tract of about 2000 acres has been acquired by the Kanawha Land Co., among the incorporators of which are Senator W. C. Sproul of Chester, Pa.; ex-Governor W. A. MacCorkle, Messrs. J. E. and W. E. Chilton, Crawford & Ashby and others of Charleston. The holdings of the company include a large level tract of bottom land which may be utilized for the location of a number of factories, and the hill land adjoining is so gently sloping that practically all of it may be utilized for residence purposes. It is the intention to extend the street

railway through this tract either by the construction of a new bridge across the Kanawha or by the utilization of the present structure, which was recently bought by the interest who own the street-car system of Charleston, and which are largely identified with the Kanawha Land Co.'s tract. In the course of time it is intended that all the conveniences of the city—water, gas, electric lights, etc.—shall be provided for this addition, and a populous and important industrial suburb is expected to be built up at an early date.

Another important improvement, although of a different character, but significant of the development that is occurring here and also of the faith that the interests represented by Senator Sproul have in Charleston, is the Edgewood residence addition, located in the west end of Charleston and covering a tract of 320 acres, which occupy an elevated and very slightly position, overlooking Charleston and the Kanawha valley. Senator W. C. Sproul is president of this enterprise, and the street-car company, of which he is also president, is being extended through the property. One hundred acres have been laid off, and although the property has not yet been advertised for sale, about a fourth of the lots have been taken by prominent residents of Charleston, who propose to build new homes in the addition. The company proposes to spend \$100,000 or so in improvements. A boulevard 100 feet wide and a mile and a-quarter in length is being built through the property, and water, gas and sewers are being put in. The Edgewood Country Club will have its clubhouse on this property, and will have golf links and such facilities as will make its country club of the finest sort. Building restrictions are imposed, so that a building line on every lot will be established, and there will be a minimum limit as to the cost of residences constructed.

These three enterprises, all of which have just been inaugurated, indicate the degree and variety of development activities existing in Charleston at this time.

ALBERT PHENIS.

ON A 1,200,000-BARREL BASIS.

Oil Production in the Kentucky-Tennessee Field.

[Special Cor. Manufacturers' Record.]

Barboursville, Ky., July 8.

The development of Kentucky-Tennessee oil fields last month was carried on vigorously, and the June record is the best of the year. Altogether 54 completions were made and a production approximating a little over 100,000 barrels obtained.

Some sensational strikes were made in the counties of lower Kentucky. In Wayne county three old-time gushers were developed, each flowing 300 barrels. The last gusher, brought in last week by the Standard Oil Co., was drilled in the Sinking region of Wayne, and is of extra importance because it proves an extension. The other gushers were in a new field in eastern Wayne county, and prove a considerable extension of the oil belt. Operations in the newer fields of Wayne county, the center of activity in Kentucky, have revealed a lower sand, known as the Beaver creek formation. This is 200 feet deeper than the formation into which wells have heretofore been drilled, and its discovery in the newer divisions is of importance.

Prices have been stationary for several months. The Standard Oil Co., which has pipe lines extending to all the fields, is now paying 91 cents per barrel for the light grade crude oil and 62 cents for the heavy grades. The Indian Refining Co., an independent concern, is paying 94 cents for the better-grade oil. The market of the latter concern does not extend to all

the fields, but the principal supply is obtained from Wayne and Wolfe counties, Kentucky. The company has a pipe line of its own into Wolfe county, and transports oil from Wayne county through the Cumberland pipe lines to Somerset, and from there ships it in tank cars to its refinery at Georgetown.

Many thousands of dollars are being expended by new operators in developing properties in this State. Among new concerns is Keeney & Cockrill, Middlesboro, Ky. This company has let contracts for a series of five wells in Wayne county. The Burning Springs Natural Gas Co., London, Ky., will equip the natural-gas wells of Clay county and market the product in surrounding towns. The Cumberland River Mining Co. of Pittsburgh, Pa., will drill extensively for oil and gas in the fields contiguous to the Cumberland river. The Kentucky Oil & Gas Co. of Columbus, Ohio, has let contracts for new wells in Wayne county, this State. The Russell Oil Co., also of Columbus, Ohio, is preparing to renew work in the Wayne county fields. The Shelby Oil & Mining Co. of Louisville has now begun drilling in Shelby county. In Knox county J. A. Tiller of this city has started some work. C. H. Dimic of Parkersburg, W. Va., is a new operator in the Floyd-Knott field. Contracts have been let for drilling several new wells. Each of these new companies will expend several thousand dollars in developing oil and gas fields of this State.

Not a great deal of test drilling is now in progress, because the prices paid for crude oil are not sufficient to justify extra risks in drilling. Should oil reach the dollar mark it is probable that many wells would be started in new fields, but at present most of the drilling is in proven regions, where the chances of getting a producer are better. There are no indications just now that the prices of crude oil will advance.

W. S. HUDSON.

POWER PLANT AND PAPER MILL.

Plans for the Two Enterprises at Roanoke Rapids.

[Special Cor. Manufacturers' Record.]

Roanoke Rapids, N. C., July 5.

Under date of May 28 correspondence from this thriving industrial town told of the plans of the Roanoke Rapids Power Co. for additional hydro-electric developments on the Roanoke river, the \$150,000 paper mill of the Roanoke Rapids Paper Manufacturing Co. and of other industries already in existence. Mr. Joseph H. Wallace, offices in the Temple Court Building, New York city, is now completing plans and specifications for both the power plant and the paper mill. The power dam will be constructed of concrete, 2000 feet long, and two 750-kilowatt generators will be installed to begin with. The power-house will be 39x49 feet in size, and its construction will include the installation of head-gates and a large quantity of machinery used in developing and transmitting electric power. The paper mill will have a capacity of 20 tons, and is to produce butchers' manila paper. It will include a main building two stories high, 60x81 feet; one-story machine shop, 40x216 feet; one-story finishing-house, 81x96 feet; an engine-room, 29x33 feet; boiler-house, 16x36 feet; cold-storage building and pumphouse. Water-wheels, head-gates and various other kinds of machinery, including boilers for 300 horse-power, pulp beaters and other paper-manufacturing machinery, will be installed. Mr. Wallace is engineer in charge of all the details for both plants. It may be added that the two companies are composed largely of the same financial interests and the paper mill will purchase its electricity for power from the power company.

IMMIGRATION AND COMMERCE

By COL. C. P. GOODYEAR of Brunswick, Ga.

[Written for the Manufacturers' Record.]

Immigration, commerce. These are the vital material needs of the South, it seems to me, for the next 25 years. The miracle of Southern development which you have so ably presented in every issue from your first number must halt if more men are not found speedily to carry the great work forward. There is much talk of the enforcement of vagrancy laws as a remedy for the scarcity of labor. It would do some good, but if every laborer worked who could work in every Southern State the crying need of more laborers would exist.

Ten per cent. of our spindles are idle for the want of labor. How long shall we continue to build new textile mills, vitally necessary to continued Southern development, under such conditions?

The lumber mills and camps of the South are run on about two-thirds time, the world needing the lumber and timber at high prices. How shall development continue here? The same conditions are true in the naval-stores industry. There are hundreds of thousands of horse-power in our rivers to be transformed into electrical power and transmitted to our manufacturing centers, at the Yadkin river and elsewhere, but only about one-third the necessary labor is obtainable, and it obtained by robbing the farm. Railroad construction of new roads and double-tracking of old roads demand an army of men not obtainable.

Cities like Chattanooga, Memphis, Atlanta, New Orleans, with ample capital for building, are halted in progress by want of labor. The tunnel under Lookout mountain and large expenditures in progress at Ducktown and throughout all the mineral district of the South are halting for want of the one essential that nothing—no labor-saving devices—can replace, namely, labor.

Millions of acres of glorious farm lands admirably suited to diversified agriculture are unimproved, and not for want of capital, but for want of labor.

States amply able to make more attractive fields of effort for their native-born citizens than any other section of the country make in the census of 1900 the following alarming comparisons:

	Native-born living elsewhere in United States.	Born in other portions of United States and living in State.
Georgia.....	410,239	189,887
S. Carolina.....	233,292	54,518
N. Carolina.....	329,625	83,371
Kentucky.....	542,043	207,439
Tennessee.....	506,445	265,370
Alabama.....	397,845	233,744
Mississippi.....	296,181	215,289

But three of the Southern States have a larger proportion of those born in other portions of the United States living in their borders than natives living elsewhere in the United States, namely, Louisiana, Arkansas and Florida.

Immigration was treated as an academic question in the South but a few years ago. It has become intensely practical in every field of human effort.

Every labor-saving device should be sought which is practical in every field of industry. It takes but a short time to make a machine, and but three years to raise a mule or a horse. It takes 21 years to raise a man, and nothing will take his place.

With the problem of immigration solved, as it will be, foreign commerce surely is of only secondary importance to the South.

Including Baltimore, the South has more than half the deep-water ports of 25 feet and over from the docks to the sea of the entire country. These ports are nearer to the vast majority of the world's com-

merce than any others, far nearer the West Indies and Central and South American commerce than any others, a commerce exceeding \$1,200,000,000, and destined to be nearer all the commerce of the Orient than any others with completion of Panama canal.

The lighter grades of railroads, permitting heavier loads to the South for the same motive power, practical freedom from ice and snow blockades, the advantage in distance for assembling exports and distributing imports, coupled with the advantages in distance by water, leave nothing to be desired.

The South, outside of its cotton crops, its lumber and timber and naval stores, has a steadily-increasing surplus of iron, steel and their products, furniture, carriages, cars, cotton goods, for which she needs new markets.

In the past she has been unable to import direct through her own ports upon any large scale. Her merchants are now rich; her banks have now ample money. It is wise economy to import direct. That port is most prosperous which has most nearly balanced an export and import trade. Loaded ships inward and outward mean low ocean freights, mean loaded cars from as well as to the ports, mean lower railroad freights.

Foreign commerce fostered through Southern ports will draw a vast share of the exports of the West and Northwest and will distribute a large share of the imports of these sections through Southern ports, across Southern territory, paying toll to the entire people of the South. There is a limit to the number of seaports of the country. Man may improve, but not create them.

The foreign commerce of the country has about doubled in the past 25 years. It will probably double again in another 25 years. There are but 24 ports with 25 feet and more channel depths docks to sea upon all our coasts. More than half of these are Southern ports. By no conceivable expenditure of government or other money will there be more than 35 25 years hence, and then more than half will be in the South, and these will have to care for a foreign trade of \$5,000,000,000 instead of a little over \$2,500,000,000, as now.

Nature has been so prodigal of her gifts to the South that we do not realize all of our pre-eminent advantages.

IRON AT BIRMINGHAM.

No Accumulation Whatsoever in the District.

[Special Cor. Manufacturers' Record.]

Birmingham, Ala., July 9.

Southern pig-iron is still enjoying a steady demand, and the statement is made that the sales during the past week will equal double the amount of the production. No. 2 foundry is quoted at \$13.50 per ton. Rumors to the effect that a lower price is being offered and accepted in this section cannot be verified. The statement has been made that some iron has been selling as low as \$13 per ton No. 2 foundry in this district, but this can hardly be believed when it is known that the production is still off and almost all of the companies have covered fairly well for the first three months of the last half of the year. Pig-iron shipments are picking up a little, both consumers and manufacturers being anxious for an early delivery on the product. The railroads are able to furnish all the cars needed for the prompt delivery of the iron, and as a consequence there is no accumulation whatsoever in

this district. The make in the Southern territory shows but little if any improvement.

The Woodward Iron Co. has imported a goodly amount of foreign labor recently to be used on and around the rebuilding of one of their furnaces.

The raw-material supply is holding up well. The only shortage complained of so far this summer has been the coke situation. However, it is believed that before long all the needs in coke will be supplied without the least hesitation.

Sales are being made of special brands and special analysis iron right along at prices from 50 cents to \$1 per ton more than the regular quotations show. An inquiry a few days since at one of the offices of an iron company elicited the following conversation: "Suppose I would tell you that we have been selling iron at \$14 and \$14.50 per ton No. 2 foundry, would you believe me? Well, it is a fact, but I want to say that it is a special brand of iron and a special analysis that commands the premium, but there is a demand for it and we are in a position to sell it."

No concessions are being made by the railroads to the iron men in this district beyond the furnishing of all the cars necessary to handle the product.

The following pig-iron quotations are given: No. 1 foundry, \$14; No. 2 foundry, \$13.50; No. 3 foundry, \$13; No. 4 foundry, \$12.50; gray forge, \$12.50; No. 1 soft, \$14; No. 2 soft, \$13.50.

The steel situation is just as active as it has been in this territory for some time. The production at Ensley is improving right along since the mixer has been repaired, and every department is again working along smoothly. The new general superintendent at the plant, C. J. Barr, and his assistant, J. H. Lefevre, have gotten down to work and are putting into effect some of their knowledge of the business. The Southern Steel Co. at Gadsden is also doing well. The repairs on the blast furnace are being rushed as much as possible. The Alabama Consolidated Coal & Iron Co.'s basic iron manufactured at Gadsden is proving of good quality and meeting all purposes of the Southern Steel Co.

Several more of the commercial coal operators in this district have signed contracts with the union miners, and now but four or five companies who have been treating with this labor are without contracts. The Southern Steel Co. has signed a contract for its Virginia City and Altoona mines, and all work has resumed there. At the mines where non-union is being given employment more labor is being brought in almost daily and the output is improving slowly.

The sale of the 17,000 acres of coal lands in Jefferson and Walker counties of the Gulf Coal & Coke Co. to J. F. Hanson, president of the Central of Georgia Railroad, and associates, the latter said to be the Pratt Consolidated Coal Co., was a most important deal. The cash involved in the deal is said to be over \$1,000,000. The Pratt Company will take up the development of the property. Col. T. G. Bush, L. B. Musgrove and others were interested in the property to a great extent. The Pratt Consolidated Coal Co. is already one of the largest independent or commercial coal companies in the South. By fall, when the Louisville & Nashville Railroad extensions now in hand have been completed, the daily output by this company will aggregate something like 20,000 tons of coal.

The Cedrom Coal Co., capital stock \$5000, is among the late incorporations in this district, with W. C. Schackelford, president; J. B. Ritter, vice-president, and J. B. Bicknell, secretary. The company

will own and operate mines, sell coal, coke, limestone, etc.

The Asbury Electric Co. has been incorporated at Anniston, Ala., capital stock \$10,000, the object of the company being to establish an electric plant on the Coosa river at lock No. 2. Those interested in the company are Capt. W. F. Johnston, Judge D. C. Blackwell, Brigham Curtis, president; Millard C. Heemston, secretary-treasurer. It is proposed to enlarge the plant later on and furnish light and power not only to Anniston, but other towns within a reasonable distance, including Birmingham.

The Cotton Stalks Products Co., recently organized for the purpose of manufacturing paper out of cotton stalks, has decided to erect the first plant at Montgomery, Ala. Birmingham capital is interested in the new company, and while Birmingham has great railroad facilities, it was deemed best to locate the plant nearer to the supply of cotton stalks, and Montgomery was chosen. The first mill will cost in the neighborhood of \$100,000. Other mills will be erected when the first has been completed and the successful operation of the same has been demonstrated.

J. H. Johnson, formerly engineer in charge of construction work in the Birmingham district with the Louisville & Nashville Railroad, has taken up the work with the Illinois Central Railroad on the construction of terminals in this city for that railroad.

More Laborers Needed.

Mr. F. B. Cole, engineer of the R. D. Cole Manufacturing Co., Newnan, Ga., one of the leading engine and boiler manufacturing concerns of the South, in a letter to the MANUFACTURERS' RECORD discussing the need of immigration, says:

"We have experimented some ourselves, and while some of them have left us, we think the experiment decidedly a success; it has relieved our labor problem largely. No one can form an idea of the trouble and uncertainty of the unskilled laborer in the South since the good times come with higher wages. It makes the question of getting other help imperative. The best way to do this is to get a line of immigrant ships started to Savannah or New Orleans. Then there must be a united effort made to induce them to come and arrange matters so they will be satisfied when they do come. The South will not grow fast unless more labor is obtained."

Navigation Company for Florida.

The Tampa Bay & West Coast Navigation Co. has been organized to operate steamboats, sailing vessels and other craft on Tampa bay, Hillsboro river, Hillsboro bay, the Gulf of Mexico and its tributaries. It may also own and operate docks, wharves, elevators, warehouses, shops, stores, etc.; capital \$50,000. The directors are R. C. Caples, Homer Wise and J. N. Johns of New York city, George B. Wilson of Passaic, N. J.; W. H. Frederick of Bethlehem, Pa., and C. E. Burns of St. Petersburg, Fla., the principal stockholder being Mr. Caples. Mr. Wise is president; Mr. Caples, vice-president and traffic manager; Mr. Wilson, secretary and treasurer, and Mr. Burns, general superintendent. Application will be made to the governor of Florida for a charter.

A paper read at the last annual meeting of the American Economic Association by Alfred Holt Stone of Mississippi on the economic feature of the negro has been reprinted in pamphlet form and is a valuable addition to the current literature bearing upon the subject. Mr. Stone writes from practical experience, and the burden of his paper is the factor of white competition with the negro.

Great Granite Development in North Carolina.

[Special Correspondence Manufacturers' Record.]

Mt. Airy, N. C., June 30.

Until I had visited the immense and well-ordered properties and plant of the North Carolina Granite Corporation at this place I had no idea how interesting

size or shape of the stone never giving the quarry manager any trouble.

The present developed portion of the quarry covers an area of 40 to 50 acres. The remainder of the property is practi-



DIMENSION STONE QUARRY.

and attractive a stone quarry could be. Whether there is so complete a plant and so interesting an operation at any other granite quarry in the country I am not able from personal knowledge to say, but it would certainly seem that there could not be a more perfectly-conducted enterprise than this is, and from such information as I have at hand I am led to believe that, taken as a whole, this plant would not suffer by comparison with any in the country.

In the first place, and as a foundation for the kind of operation seen here, there is an immense deposit of superior granite. Lying smooth and even, with a gentle slope towards the base of the hill, there is an area of almost 300 acres of granite, the rock in which is of uniform quality and extends to a great depth.

A peculiarity of this granite, in which it is different from almost all other quarries, is that it has no natural seams. The granite lays in a solid mass of uniform texture throughout, and for this reason the granite may be split true to a line in either direction. Single stones more than 300 feet in length have been split out.

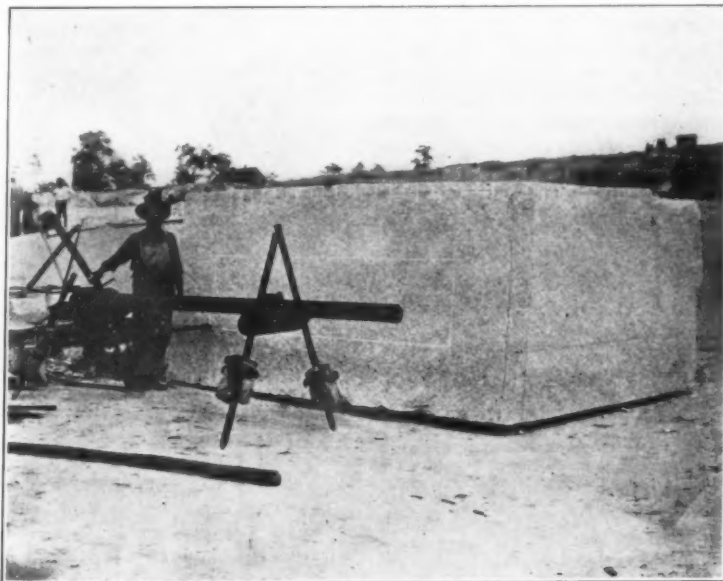
cally all granite, with only about 18 inches of dirt covering the surface. Along the base of the hill are the railroad tracks. The exposed portion of the tract rises gradually from the railroad tracks up to the summit of the hill, about 125 feet of an elevation. The gradual rise of the property above the railroad siding enables the stone to be carried down the hill by gravity instead of having to be raised out of a hole, as in most quarries, which makes it probably the most economically-operated granite quarry in the country.

The color of the Mt. Airy granite is a very light gray, it being probably the lightest-colored stone on the market. It is free from all injurious substances, and is about as true a granite as is possible to find. Being a very free-cutting stone, it is much liked by granite-cutters on that account, and can be cut about 15 to 20 per cent. faster than most of the New England granites. At the same time its crushing strength is sufficient for the heaviest operations. Its durability is demonstrated by the fact that in the town of Mt. Airy there are slabs from this quarry which have been exposed to the elements for the

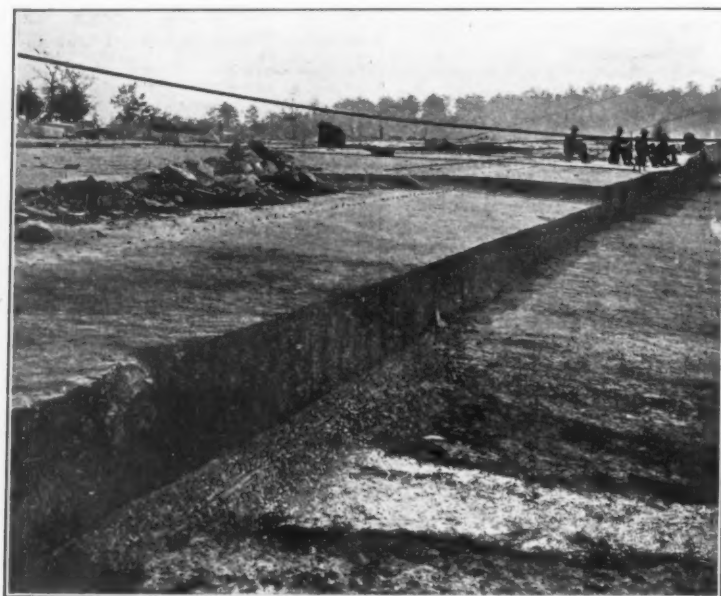
split out for a more economical handling in the ledge or "lift." As much as two or three acres may be broken loose by one operation.

The process of "lifting" is to drill a two or three-inch hole in the center of a sheet or area to be "lifted," the hole being sunk six or eight feet deep, depending on the greatest thickness of the stone required. A charge of dynamite is then exploded at the bottom of the hole, which forms a pocket. Into this pocket a charge of powder is exploded, which creates a horizontal crack or cleavage, and successive charges of powder are exploded until the cleavage has extended to a radius of 75 or 100 feet in all directions from the "lift" hole. Then compressed air is introduced. A pipe is cemented into the hole and compressed air at 70 to 80 pounds pressure is gradually admitted. The cleavage extends rapidly, simply from this introduction of compressed air, until it comes out on the hillside in a thin edge. The whole process by which two or three acres of stone is thus "lifted" requires hardly more than one-half hour. The lift or ledge may then be worked up into any size blocks required, the larger blocks being used for mill blocks or for contract work in the company's own cutting sheds,

buildings in which Mt. Airy granite has been used, as there are hundreds of public buildings and residences throughout the country which are wholly or in part constructed of this granite. Philadelphia takes hundreds of carloads of this granite every year, and it is used in yards all over the country and considered one of the standard granites by all of them. In points as far apart as Superior, Wis., and Key West, Fla., and between New York and St. Louis, Mt. Airy granite will be found in use not only in buildings, but for every other kind of work for which granite is required, from the highest grade of monumental work to street curbing, paving blocks and crushed stone. In the cutting plant there is now being prepared a pedestal for the Washington monument, which will be placed on the Brooklyn end of the Williamsburg bridge. The pedestal will consist of four large stones, the largest of which will weigh 60 tons in the rough. An order has just been booked for a 90-foot shaft to be erected by Minnesota on the Vicksburg battlefield. A handsome cross monument is being turned out for a cemetery at Chicago. A \$25,000 monument to the Confederate dead, erected at Raleigh, N. C., is of Mt. Airy granite, and is just as bright as on the day it was fin-



70-TON BLOCK OF GRANITE, QUARRIED FOR MONUMENTAL PURPOSES.



GENERAL QUARRY VIEW, SHOWING ONE OF THE LEDGES.

fine splitting qualities of this granite are demonstrated by a slab now lying in the quarries, which is 54 feet long, 2 feet 4 inches wide, and only 8 inches thick. This makes it possible to work the stone into any dimensions required. A 200-foot shaft might be quarried out if needed, the

past 75 years, and are wholly unaffected and unstained by the weather.

On account of the texture of this granite, the method adopted for cleaving is unique and exceedingly interesting. As the stone splits readily in a straight line in almost any direction, great sheets are

while the smaller portions are worked up into curbing, Belgian paving blocks, etc., for which there is a constant demand.

All the waste rock of the quarry is put through a crushing mill, the crushed stone being used for railroad ballast, for concrete and for such purposes.

The Mt. Airy granite has already been very widely introduced throughout the United States. One of the handsomest residences in America is that of Peter G. Thomson of College Hill, Cincinnati, just being completed, which is being built entirely of this stone. The third story of the new National Museum building at Washington, now under construction, is of Mt. Airy granite. A fine cathedral is built of this stone at Harrisburg, Pa. One of the finest churches in the South, St. Paul's Catholic Church at Portsmouth, Va., is of this granite.

The first two stories of the Land Title Building at Philadelphia, corner of Broad and Chestnut streets, one of the finest office buildings in that city, is of Mt. Airy granite, and after standing for 10 years the granite is as fresh and bright and as free from weathering effects and other imperfections as on the day the building was first finished. Mt. Airy granite was used for the Manayunk National Bank building and the Excelsior Trust & Savings Fund Co.'s building in Philadelphia.

These are merely a few of the prominent

ished, 11 years ago. The corporation does not travel a drummer, and yet the business is expanding all the time, much of it coming in by mail. The company is now competing with New England quarries in all the big markets, and in street-paving material with the quarries of Georgia.

The development of this property dates back to 1880, when Thomas Woodroffe, who was formerly from England, had a contract for the construction of the station for the Southern Railway at Mt. Airy. He heard of this granite deposit and organized a company, and with his sons opened up the quarry in a small way. Though working slowly at the start, the granite met with a good reception at the beginning. Sufficient money was not provided by the stockholders, however, and development on the scale desired was impossible. After the death of Thos. Woodroffe the sons took hold of the enterprise, and about two years ago succeeded in organizing the present corporation and bought the property.

The North Carolina Granite Corporation has an authorized capital of \$1,000,000. There has been actually issued \$463,000 of stock, which represents the investment in the property here and the purchase also of 1750 acres in Wilkes and Alleghany counties, where Stone Mountain and deposits at the base are found to have the same character of granite as

that at Mt. Airy. This property will be held for development later on. The stock in the new corporation is held all over the United States and Canada. Colin Fraser, who came from Winnipeg, was elected president, and is the active head of the company, with headquarters at Philadelphia; Thomas Woodroffe is vice-president, and George Woodroffe, assistant treasurer. The Woodroffes remain at Mt. Airy about

they are operated by independent engines of the American Hoist & Derrick Co.'s make. Each will handle an eight-ton load. An incline is used for the heavier loads up to 60 tons, or any weight that may be required. At present 60 tons is the heaviest weight that has been handled. The stone crusher, so located that everything goes through by gravity, is equipped with a Gates machine with a capacity of 250 to

marked increase in the size and improvements that have taken place in Mt. Airy in the last 16 years. According to the census of 1890, there was a population of 1200 at Mt. Airy. At present Mt. Airy has 5000 or 6000, and is a smart, wide-awake town.

There are three modern well-equipped furniture factories making bedroom sets and tables, also two chair factories, a bobbin factory, wagon factory, a buggy and carriage factory and a large-sized planing mill. There are woolen mills making blankets and yarns, a cotton mill which spins and weaves, an overall factory, a branch of the American tobacco factory, an ice factory, seven brickyards and marble yards and two granite-cutting plants. There are two thriving banks and a loan and trust company in the city. Mt. Airy is the center of trade for a territory extending 30 or 40 miles about, and is attracting outsiders from all over the country. The granite quarry and furniture factories are the largest employers of labor there, the granite quarry working about 450 hands. The granite company's pay-roll has gone as high as \$25,000 a month. It is considered that the large number of families which have been brought into Mt. Airy by the granite quarry and the furniture factories have provided a quality, and quantity of such help as might be utilized in cotton mills and other factories, and the live Board of Trade and the Commercial Club with which Mt. Airy is provided are working to induce the location of manufactories at Mt. Airy.

The city a few years ago created a bonded indebtedness of \$100,000, with which water-works and an electric-light and power plant were constructed. These plants are models of municipal ownership. The electric-light and power plant, which has been in operation for two years, is operated by water-power and develops at present 350 horse-power, and the capacity can be increased. Power is offered to manufacturers at a very low rate, ranging

operation of the electric-light and power plant has been very successful, it paying interest on bonds and running expenses already.

It is considered that Mt. Airy presents a first-class opening for cotton mills and knitting mills and enterprises of that sort. As the country surrounding Mt. Airy is full of timber, largely white oak, it is considered that there is also a good chance here for woodworking plants in addition to those already located.

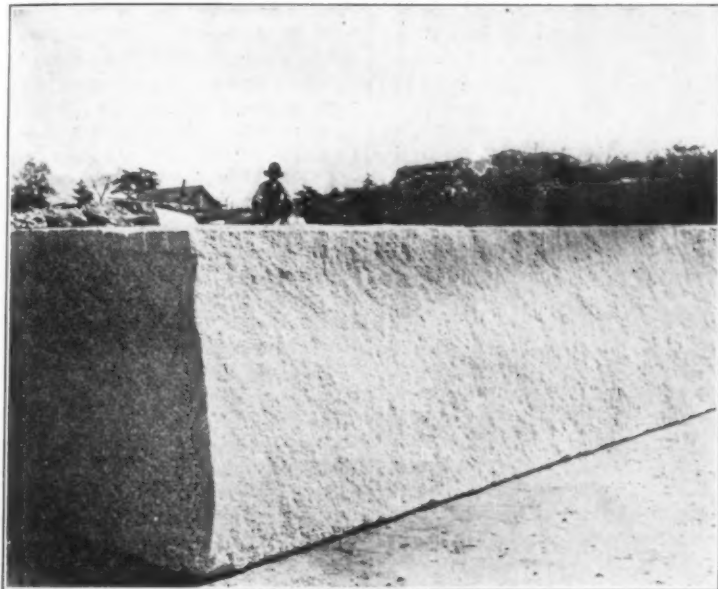
Mt. Airy is an immense fruit market, the territory surrounding being one of the best apple sections in the whole country. Being well up in the mountains, the climate is especially favorable, and is visited during the summer time by numbers of persons from lower altitudes. Four miles out from the city is the quite famous resort of White Sulphur Springs, where a newly-rebuilt hotel with 140 sleeping rooms has just been opened.

What has been already accomplished here in an industrial way promises to be reduplicated many times over in the near future, and as a place to live or a resort to visit, Mt. Airy seems destined for an even higher name than it has heretofore enjoyed.

ALBERT PHENIX.

Another Portland Cement Plant.

That the South will soon have another large Portland cement plant is indicated in dispatches from Stanton, Ky., which report the incorporation of the Patrick Cement Co. by Messrs. J. C. Patrick and J. D. Atkinson and Mrs. Kate S. Bohannon. The company is capitalized at the nominal amount of \$25,000, with privilege of increasing to \$500,000, and it is understood to own about 1000 acres of lands, valued at \$200,000 and containing limestone and clay. It is stated that the organization of this company is the result of the discovery and testing of cement clays in Powell county some months ago by the Kentucky State Geological Survey. The plant will have a capacity of 500 bar-



LEDGE VIEW.

all the time, and are the practical men of the enterprise. A sales office has been established at No. 1 Madison avenue, New York, with Perry & Balch in charge. Other offices are at Chicago, Cincinnati, Cleveland and St. Louis, Newport News and Norfolk. The heavy end of the selling is done at Mt. Airy, however, and the bulk of the office work is also done at this place. The quarry business is thoroughly understood by the Woodroffes, and every detail of the office and practical management is conducted in the most thorough, systematic and up-to-date manner.

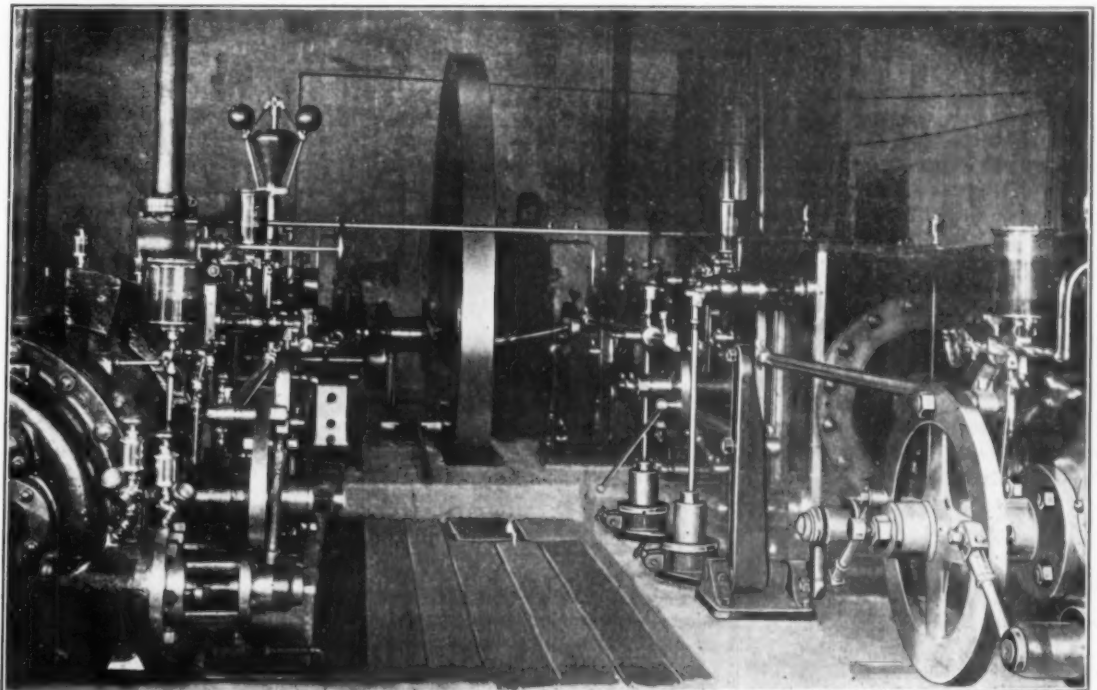
With the reorganization of the company numerous improvements have been made, and the management feels that the establishment is just getting in shape to do real business. Since the beginning of operations 15,000 carloads of granite have been shipped out, and this has hardly more than opened up the property. About 1500 carloads a year has been the average for some years. The present capacity is between 2000 and 3000 cars, and it is expected that this limit will be reached this season.

Very substantial buildings have been constructed for the various operations of the enterprise. The new stonecutting plant is 300x65 feet in dimensions, and will be extended 300 feet. It has cost \$100,000, and is supplied with an electrical crane of 25 tons capacity, 16 surfacing machines and a thorough equipment of pneumatic tools of all sorts. The main boiler plant is equipped with two Heine safety boilers, with an aggregate capacity of 420 horse-power. The air compressor is a Sullivan 2000 feet per minute machine of the Corliss cross-compound type. It was built expressly for this plant, and is the most modern machine the builders know how to construct. It supplies the cutting plant and power for the pneumatic drills in use throughout the quarry. An electrical generator, 100-kilowatt Bullock machine direct connected to an Ideal compound engine, 150 horse-power, drives the crane and the grindstones, and will be used for independent machines, machine shops, etc.

There are eight cableways for conveying stone blocks to the railroad cars, and

300 tons a day. While the demand for crushed stone is always up to the supply, the crusher is a mere side issue and is operated simply to keep the quarries clean.

Another fine equipment is the water plant located at the upper end of the property. Here a storage basin has been provided holding several million gallons of water and having sufficient head to furnish gravity supply for the plant. Present track facilities, sidings, etc., are sufficient to hold 60 cars, and extensive improve-



SULLIVAN CORLISS CROSS-COMPOUND TWO-STAGE AIR COMPRESSOR—PISTON DISPLACEMENT OF 2000 CUBIC FEET OF FREE AIR PER MINUTE.

ments in this line will be made later on as required. The entire plant is so designed that it can be duplicated all the way through. The management is looking to the future, confident that what has been accomplished up to this time is really nothing more than a good start.

The stone quarry, as much as anything else, may be held responsible for the

from two cents to one cent per kilowatt hour, according to the amount of power used. It is felt that this advantageous offer of cheap power, in connection with the healthful and very desirable location of Mt. Airy, and the good supply of labor, should result in the location of a number of factories at Mt. Airy. In spite of the low charge made for lights and power, the

rels and cost \$350,000. Mr. C. G. Holmes of Columbus, Ohio, is engineer in charge.

The Commercial Club of Abbeville, S. C., has been organized with Messrs. F. E. Harrison, W. P. Greene, G. A. Neuffer, L. W. White, J. P. Quarles, R. S. Link, F. B. Bary, H. G. Smith and J. S. Stark, board of directors.

REINFORCED CONCRETE IN BUILDING OPERATIONS.

[Written for the Manufacturers' Record.]

Indicative of the rapid strides that have been made in recent years in the use of reinforced concrete for building construc-

are reinforced by seven-eighths to one-and-one-eighth-inch round bars, about three bars being used to a beam. All of

half an inch in diameter. The roof, which is also of concrete, is constructed as an additional story, so that it can be used as a roof garden. The concrete framework of this building was started early in March, and was entirely completed by June 15, being about three months, which

about \$95,000, and the total amount of the various materials used were 5200 barrels of cement, 2500 cubic yards of sand, 5300 cubic yards of broken stone and 300 tons of steel bars.

The exterior or curtain walls of the building are of granite, Indiana limestone, brick and ornamental terra-cotta, with numerous balconies enriched with ornamental wrought-iron work.

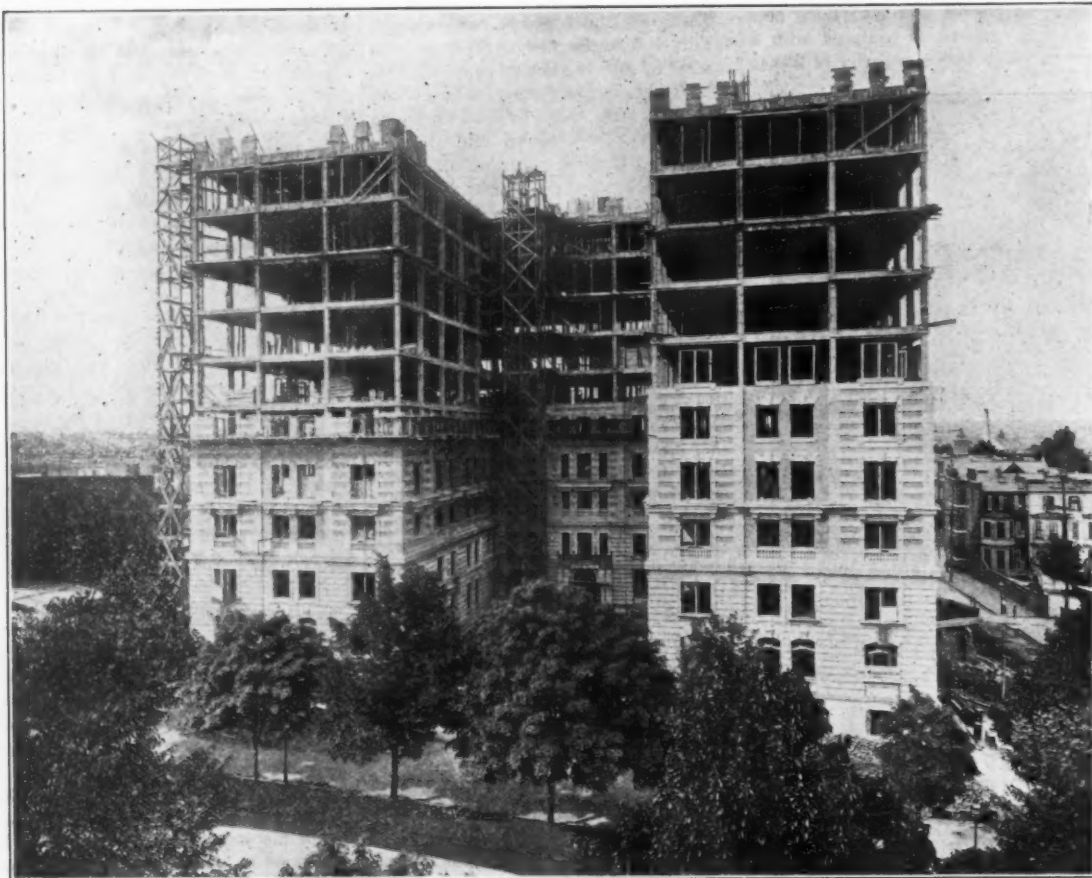
Two high-speed electric elevators enclosed in heavy bronze grille will be provided for passengers, and dumbwaiters will be installed to every apartment for carrying supplies.

The entrance lobby and reception-room on the first floor will be finished in marble and relief work, and the cafe, which will be one of the features of the building, will be elaborately decorated. All hallways will be laid with mosaic floors with marble bases, and the stairways will be of marble and bronze. The woodwork throughout the building will consist of various kinds of highly-polished and hand-smoothed hardwoods.

The building will be further equipped with the most modern sanitary fixtures, water filters, patented system of heating, hot-water circulation and vacuum-cleaning system, which will have connections in each apartment and which insures the cleaning of the rooms in the most sanitary manner.

Great care was taken in preparing the plans for the building, it being desired to provide every modern device for the comfort of the occupants, and the successful manner in which this has been worked out has been due in no small part to the architect, Mr. Edward H. Glidden of Baltimore, who has made a specialty for a number of years in designing apartment-houses.

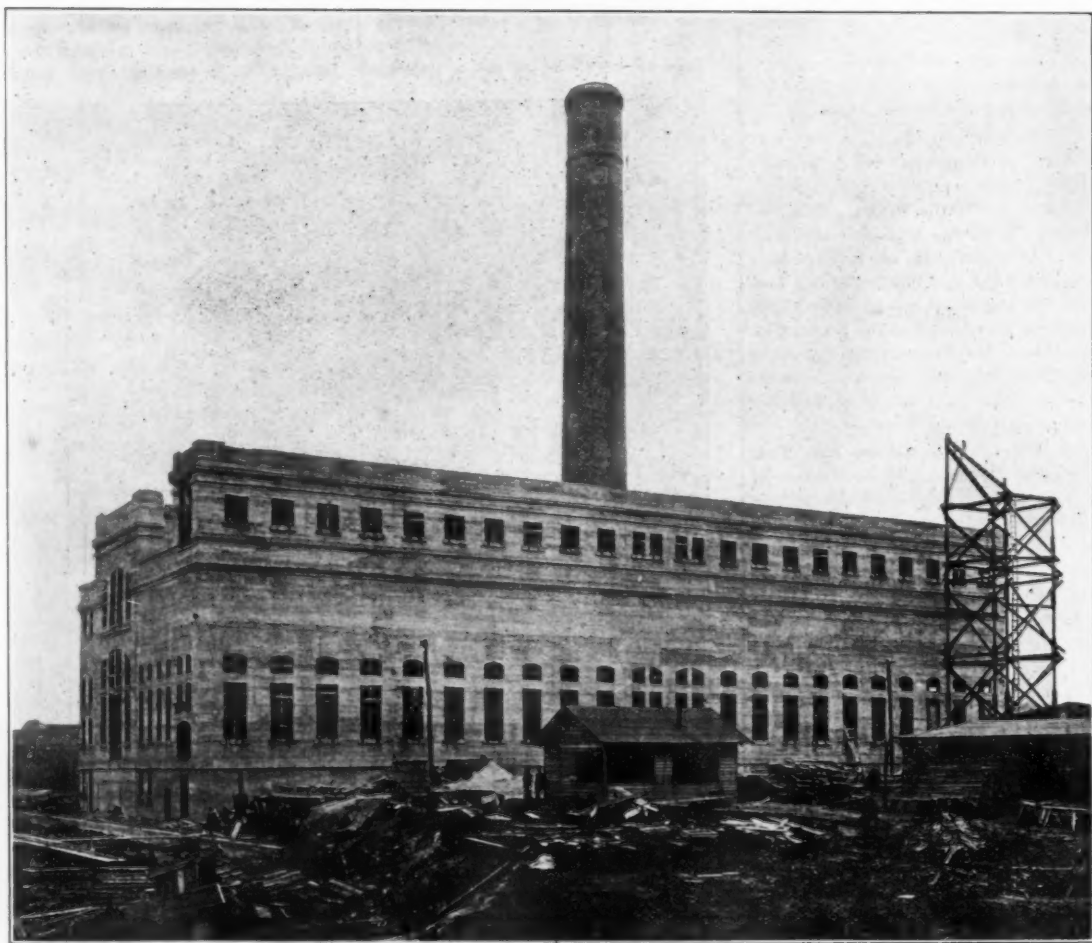
The various subcontractors who supplied the materials and equipment for this



MARLBOROUGH APARTMENT-HOUSE IN COURSE OF ERECTION.

tion has been the work of the Baltimore Ferro-Concrete Co., which has lately finished several structures of more than usual interest.

The latest large work of this company is the Marlborough Apartment-House in Baltimore. This building, it is claimed, is the largest apartment-house ever built in the world of reinforced concrete, and it is a splendid example of the great possibilities of this character of construction. This building, which is 10 stories and basement in height, is well situated on one of the highest points in the city, and extends 162 feet along Eutaw Place, which is a parkway street, and 130 feet along Wilson street, and has an entrance court on Eutaw Place 55x74 feet. The southern side of the building faces on Wilson street, under which the Pennsylvania Railroad tunnel runs 40 feet below the surface, and on this account it was necessary to put in extra heavy foundations to insure the occupants from annoyance of trains passing through the tunnel. After excavations were made to a depth of 30 feet, solid rock was struck, and into this caissons were sunk, seven feet square and filled with concrete. Ten of these caissons were built nearest to the tunnel, and a second row further north, eight feet deep, were also sunk, while the foundations at the northern end of the building rests on the natural soil, which is composed of hard clay and gravel. The columns in the basement of the building are 14 inches square, and are reinforced by eight one-and-three-eighths-inch round steel bars. Higher up these columns are reduced in size to 12 inches square, while the columns in the top stories are 10 inches square, and are reinforced by four three-quarter-inch round steel bars. The beams throughout the building vary in size, according to the span, from 8 to 14 inches in depth, and



WESTPORT POWER-HOUSE.

the floor slabs are four and one-half inches thick, and are reinforced with bars varying in size from seven-sixteenths to one-

is a very remarkable record for a building of this character.

The cost of the concrete work was

building are: Masonry, D. M. Andrews of Baltimore; terra-cotta, Atlantic Terra-Cotta Co. of Brooklyn, N. Y.; tile and

mosaic work, S. H. Calkins Company of Baltimore; reinforced-concrete work, Baltimore Ferro-Concrete Co. of Baltimore; plumbing, J. W. Cooney of New York; elevators, Otis Elevator Co. of New York, and installed by Bartlett, Hayward & Co. of Baltimore; steam-heating, vacuum system of Warren Webster & Co. of Camden, N. J., and installed by Crook-Horner Company of Baltimore; flat-wire work, Dufur & Co. of Baltimore; ornamental iron, Hecla Iron Works of New York; plastering, Eastman Bros. Company, Chicago, Ill.; marble, Hilgartner Marble Co. of Baltimore; gas ranges, H. W. Hunter of Baltimore; electric wiring, Arthur France & Co. of Chicago; wall safes, J. H. Herrick of Baltimore; mantel facings, David Fishbach & Co. of Baltimore; face brick, Albert D. Klein of Baltimore and Washington Hydraulic Pressed Brick Co. of Washington, D. C.; sash weights, Levering Bros. of Baltimore; wood mantels, John C. Knipp of Baltimore; sheet metal,

from \$2200 to \$3500 a year, according to location.

Another example of a building of widely different character which has recently been completed in Baltimore by the Baltimore Ferro-Concrete Co. is the Westport electric power-house of the Consolidated Gas, Electric Light & Power Co. The building, which it is claimed is the largest light and power station in the South and the largest reinforced-concrete power station in the world, is built entirely of concrete, including the exterior walls. It is 115x255 feet, with a single story 70 feet high, with operating galleries and coal storage, and is equipped with machinery capable of developing 30,000 horse-power. This building cost to construct about \$125,000.

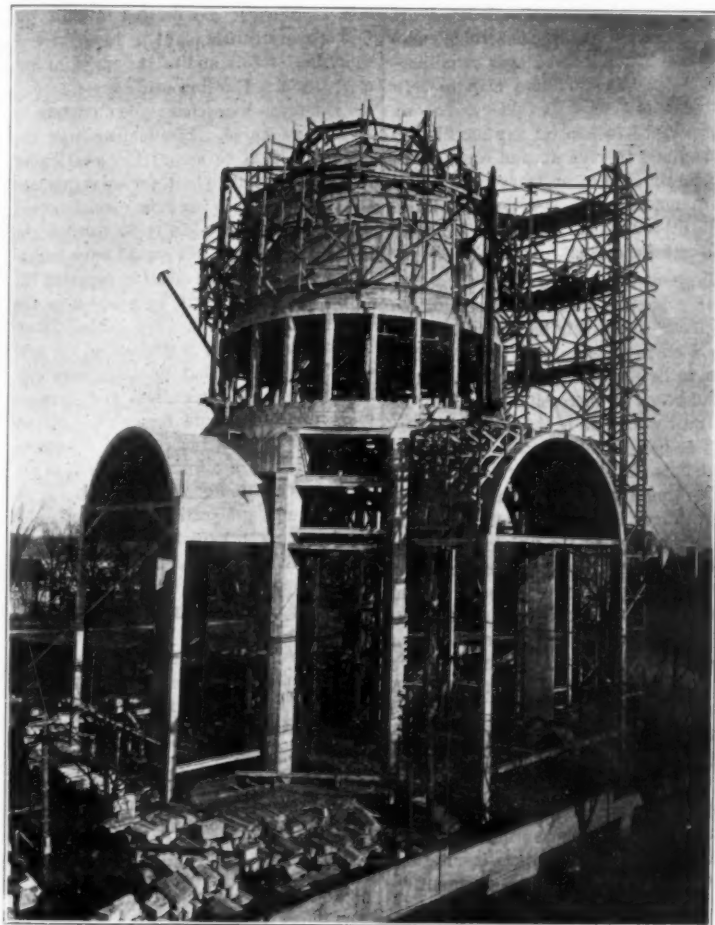
Perhaps what was the most notable work for boldness ever attempted in this kind of construction was the erection of the new chapel building at the United States Naval Academy at Annapolis by

the concrete in the thickest part is only eight inches. The roof arches of the four transepts are another notable part of this structure. Each of them has a clear span of 42 feet 10 inches, and has a thickness at the crown of the arch of eight inches and at the skewbacks of 14 inches. The total height of this building from the ground level to the filial of the cupola is 192 feet 3 inches, and the total outside diameter, including the wings, is 130 feet.

Other examples of reinforced-concrete work successfully carried out by the Baltimore Ferro-Concrete Co. include the following, the prices quoted being for the concrete work alone: Terminal station at Atlanta, Ga., and the approaches to the station, \$130,000; Pennsylvania Railroad Co.'s office building in Baltimore, \$8000; mill building in Yonkers, N. Y., entirely of concrete, 60x300 feet, \$85,000; roof on United Railways & Electric Co.'s car barn in Baltimore, 150x300 feet, \$17,000; Henry Sonneborn & Co.'s power-house in

Baltimore, entirely of concrete, \$17,000; Wendell Apartment-House in Washington, D. C., skeleton framework, \$10,000; Wm. Kuabe & Co.'s piano factory in Baltimore, skeleton framework, \$45,000; Glenn Office Building in Baltimore, skeleton framework, \$8000; Thos. C. Basshor Company's warehouse and machine shop in Baltimore, skeleton framework, \$12,000; two coal bins, each 40 feet in diameter, in Greensburg, Pa., \$17,000; warehouse in Yonkers, N. Y., seven stories, 120x300 feet, entirely of concrete, \$100,000; group of buildings for the Convent of Notre Dame in Montreal, Canada, \$140,000; Holy Angels' School, Buffalo, N. Y., cupola 50x50 feet, \$22,000.

The widely-diversified character of buildings contained in this list illustrates the successful adaptability of reinforced concrete to every class of building structure desired, and further emphasizes its position as a standard high-class method of modern building construction.



CHAPEL UNITED STATES NAVAL ACADEMY.

C. D. Pruden Company of Baltimore; cabinet work, C. F. Meislahn & Co. of Baltimore and George W. Smith & Co. of Philadelphia, Pa.; cement sidewalks, John H. Thormann & Co. of Baltimore; fire-proof partitions, United States Gypsum Co. of New York; cleaning system, Vacuum Cleaning Co. of New York; tile roof, Warren-Ehret Company of Philadelphia, Pa.; lighting fixtures, Sterling Bronze Co. of New York.

The Washington is another apartment-house which was constructed in Baltimore of reinforced concrete by the Baltimore Ferro-Concrete Co. after designs by Mr. Glidden. This building is six stories in height and has an exterior of limestone, and for general excellence in every detail, richness in finish and elaborate equipment is equal to any of the finest apartment-houses in the country. Some idea of the elaborate yet rich manner in which the plans were carried out may be obtained from the fact that seven-room apartments in this building are renting

this same company. As will be noticed in the accompanying illustration, the building consists of a main auditorium surmounted by a large dome, and has four wings extending from the sides of the building. This was a most difficult piece of work to carry out, as the dome was of smaller diameter than the main structure, and consequently had to be carried in cantilever over its supports. These supports consisted of eight piers or columns, arranged in pairs around a circle 83 feet 4 inches in diameter, and rise vertically to a height of 35 feet, when they corbel radially inward until they reach a circle 72 feet in diameter. They are then surmounted by a circular girder, on top of which are placed 24 columns, which also corbel radially inward and carry a second circular girder. This girder supports the ceiling and the main dome. The cupola which surmounts the dome is carried by a pyramidal framework with spreading legs set into the main dome shell near its bottom. The main dome, shown in the illustration, is 60 feet in diameter, and

INDUSTRIAL PROGRESS OF THE UNITED STATES.

By D. G. BOISSEVAIN.

[Written for the Manufacturers' Record.]

In recent years no events have been of greater consequence in the development of the United States than the taking effect of the specie payment resumption act on January 1, 1879, and the act of March 14, 1900, which empowered the treasury with means for the maintenance of the gold standard. Each act lifted the commercial standing of the United States to a higher level. What is more natural than that the people should take advantage of the improved financial position of their country and embark in new enterprises or improve the efficiency of existing agencies for the development of their country's boundless natural resources. Therefore 1879, as well as 1900, marks the commencement of a new era of more pronounced activity in every commercial pursuit.

The act of 1900 placed the United States on a level with the "gold countries" of Europe. From that date the banks throughout the country derived to the full extent the benefit of the connections with their sister institutions in London, Paris and Berlin.

At all times the influx of foreigners has proved a reliable barometer of the prevailing prosperity, indicating the demand for labor required to co-operate with capital in their joint object of satisfying the growing needs of a progressive nation.

In the five years following 1879 the average percentage of immigration to the total increase in population was 50.02. In the five preceding years the percentage was 14.17. In the five years following 1900 the average percentage of immigration to the total increase in population was 55.89. For 1905 the percentage was 73.80, the highest on record. In the five preceding years the percentage was 21.09.

The division of the export trade during the periods under review appear in the following table:

	1879-1884.	1900-1905.	1905.
Ratio of exports of agricultural products to total export trade....	78.43	60.93	55.03
Ratio of exports of manufactured products to total export trade.....	15.85	31.03	38.44

That the United States is becoming more and more a manufacturing country is further emphasized by the following data:

	Per capita. 1884.	Per capita. 1905.	Increase.
Value of manufactured products exported..\$2.48		\$6.55	165%
Value of agricultural products exported.. 9.80		9.85	

Simultaneously the importation per

capita of articles manufactured ready for consumption declined 18 per cent.

It appears from the above that the American industries are not only pushing their articles on the world's markets, but they also supplant the goods "made abroad" by those made in the United States.

According to the census figures of the last 20 years, the number of persons employed in the industries increased 110 per cent., while that of persons engaged in agriculture increased only 35 per cent. This difference is the more striking when considering that in the same period the total population of the United States has increased by 50 per cent.

The following comparative table, compiled from the twelfth census, shows the rapidly-growing production of manufactured articles:

	1880.	1900.	Increase.
Per capita value of total industrial products manufactured.....	\$107.38	\$171.56	60%
Percentage of exports of manufactures to total production of manufactures.....	2%	2.33%	60%
Per capita value of agricultural products....	\$44.34	\$49.53	12%
Percentage of exports of agricultural products to total production... Decrease.	21%	11%	50%

It is of interest to note that in this period the average wages paid per capita in the manufacturing industries of the United States increased 38 per cent. It undoubtedly is good evidence of the efficient management of the American industries that, notwithstanding the increased cost of labor, Dun's index number, covering the total cost of the necessary articles of daily consumption, shows an average of 99 for both 1884 and 1905, each being the fifth year in a period of trade expansion.

The item of transportation is a very important one in the compilation of the total cost of production. For this reason it is necessary to lay stress upon the reduction in the average freight charges levied by the railroads, aggregating 30 per cent. from 1884 to 1905.

Pertaining to the growth of the general business of the country are the figures relating to the bank clearings. They indicate an increase in business transacted per capita of 100 per cent. in 1905 over 1884, and an expansion of 52 per cent. over five years ago.

To what extent the banks have rendered assistance in this enormous commercial and industrial development is demonstrated by the facts that the aggregate loans and discounts outstanding by the national banks in 1884 were \$22.64 per

capita; in 1900 they were \$35.34 per capita, an increase over 1884 of 55 per cent., and in 1905 they were \$48.16 per capita, an increase over 1900 of 36 per cent. and an increase over 1884 of 113 per cent.

As the mercantile and industrial community continue to require more banking facilities for the purpose of meeting the growing requirements of the country, the national banks are being compelled to apply their resources close to the limit of their funds, as evidenced by the ratio of reserve held to deposits. In 1884 it was 31.6; in 1900 it was 29.7, a decrease since 1884 of 6 per cent., and in 1905 it was 21.7, a decrease since 1900 of 27 per cent.

Now should be considered the question of elasticity of the circulation medium in relation to the expansion in the business done by the country:

Circulation.	Per capita Jan. 1900.	Per capita Sept. 1905.	Inc.
Gold and gold certificates.....	\$10.72	\$13.46	25%
Silver and silver certificates.....	7.20	7.84	9%
U. S. and Treasury notes.....	5.58	4.13	26%
National bank notes.....	3.21	6.00	87%
Total.....	\$26.71	\$31.43	18%

*Decrease.

These figures should be considered in the light of those showing the progress in the industries and commerce as tabulated above.

The recent investments made by the railroads and by the industrial corporations are very heavy, but they are made compulsory on account of the public demanding still better service, and a rising standard of living constantly creates new wants. It may be said that the railroads, as well as the banks, are performing their duty properly toward the public, and that the wage-earner is being well compensated for his share in the production. But when the banks have done what they possibly can do, when the industrial agencies of production are to be held in check for lack of sufficient additional financial assistance, then the moment has arrived for the legislature to take measures that will keep the way open for commerce and industry to continue to progress within the limits of safe expansion. It should be made possible to regulate the circulation medium according to the requirements of commerce and industry.

New York, June, 1906.

SUMMER IN THE SOUTH.

By I. S. FIELD.

[Written for the Manufacturers' Record.]

With icy blasts and driven snow, the Northern wayfarer instinctively turns to literature descriptive of the charms of the South. What such alluring booklets as are issued by the Southern Railway and some of the other prominent Southern lines then do to the purse of paterfamilias is shown by passenger agents' reports and hotel registers to be what might be called "a plenty." And every year the tide of travel to the South continues to grow in volume, till it sometimes seems the day must come when no one who can afford the fare will permit himself and family to be found in the North when the season of blizzards and zero weather is on.

It would appear not so difficult a task to arouse enthusiasm over a land where palms and posies are growing in the open, where soft blue skies and warbling songsters everywhere abound, when the whole North is one solid ball of ice, but there does appear a touch of genius in the work of making the Northerner long to journey toward the Southern Cross at a time when sunstrokes are occurring in Chicago and New York seems as torrid as a middle kettle in Tophet.

This is the genius the Southern Railway shows. Through its passenger department the same liberal and broad-

gauged policy which has provided most attractive literature covering the Florida and other Southern resorts of the winter has produced a series of pamphlets on the mountain resorts of the South reached by the Southern Railway which bring before the reader visions of shady glens and inviting bypaths, murmuring brooks and foaming cascades, balsam forests and mountain fastnesses, where the rare air is ozone-laden and the nights so cool that refreshing slumber comes to all unbidden.

"The Land of the Sky" and "The Sapphire Country" are the two principal booklets which Passenger Traffic Manager S. H. Hardwick and General Passenger Agent Wm. H. Tayloe have issued from the passenger department of the Southern Railway, and they most attractively present the charms of the North Carolina mountains. The numerous illustrations show many of the most beautiful spots in that famous region, such as the Toxaway lake, and inn and mountain, and there are trout streams and waterfalls and mountain ranges and bridle paths that cover so wide a variety of attractions as would make appeal to every taste.

The letterpress is in keeping with the artistic illustrations, so that little is left the reader of these booklets but to take a Southern Railway train, go to the land described and enter into an enjoyment of the scenes with which he or she has been made familiar.

It is a theory held even by some railroad men that the passenger end of the business of the railroads is of secondary importance, and is largely ornamental at best. No such theory finds countenance with Mr. Hardwick, and the faith that is in him is evidenced in the service he provides and in the work his department engages in to induce people to travel over his lines. Commodious and attractive passenger stations are being provided all along the Southern Railway line, well-ballasted double tracks are becoming the rule, and many of the passenger trains on the line are unsurpassed in elegance and luxury of appointment by the trains of the best roads of the North.

The Southern is, in truth, expanding in every way, and with its nearly 10,000 miles of line is destined to become so much greater as a system and as a factor in the development of a very large section of the South that there are those who declare it to be only now in its infancy, gigantic as that infancy may be.

LABOR AND IMMIGRATION.

A Western View of Changes Now Under Way.

H. H. Gillingham of the John F. Byers Machine Co., Ravenna, Ohio, writes to the MANUFACTURERS' RECORD as follows:

"As regards skilled labor, there is a decided shortage in all classes, especially in molders, machinists and boiler-makers. The shortage in these classes of skilled labor will become more pronounced in the future than at present. The cause of this condition as we see it is the small ratio of apprentices allowed in the different trades by the labor unions. There are not enough young men learning trades today to keep the ranks full, and as business expands from the natural growth of the country this lack of new mechanics will be felt more and more.

"A few years ago there was a large number of skilled workmen from the old countries coming here and seeking positions, but the restrictions of the unions over there have resulted in cutting off this supply to such an extent that it is seldom that we receive an application from a newly-arrived foreigner for a position in any of the trades above mentioned.

"Unskilled labor is easier to secure from the fact that practically all of the great

influx of foreigners for the last five years has been of this class of labor. In many localities, however, there is a shortage of unskilled laborers, caused, as it seems, by the great amount of railroad work being done and many large public works under construction.

"Three-fourths and perhaps more of the foreign labor now in this country are controlled by padrones or labor agencies; so it is easier to get a bunch of 100 or more laborers than to get a half-dozen in some isolated places. Farmers, especially, complain that they are compelled to let their farms go uncultivated because of the scarcity of labor and their inability to pay such wages as would induce men to leave the factories and workshops for the farm.

"Is the individual laborer or mechanic more efficient than formerly or less so, and in either case to what do you attribute the change? To this question we could answer yes and no, but we think the preponderance of evidence would show that the average mechanic is less efficient than formerly, and the employer is largely to blame for this condition. Thirty years ago a 'machinist' meant something more than a vise hand, lathe, planer or milling-machine operator. Then a man to be a good machinist must be able to do any work assigned to him on any machine in the shop and to take up and carry on to a finish any kind of ordinary work. The modern machine-shop practice has killed off this all-round man and left in his place the so-called specialist.

"Many small shops are crippled for days at a time because some man who runs the 'big planer' or the 'big boring mill' is off, sick or on a pleasure trip. Specializing seems to be the order of the day, but if the fad keeps on increasing it will not be long until when one is sick it will be necessary to have a half-dozen specialist doctors to cure the stomachache.

"The length of time required of a boy at low wages learning a trade before he will be admitted to the unions as a full-fledged workman, and knowing also that he will have opportunity to learn how to do only a few things, drives him to common labor perhaps, where he can earn men's wages right at the start. Have your specialists, but hang on to your all-round machinist. There are no efforts being made in this vicinity to bring in foreign labor so far as we know.

"To increase the efficiency and supply of labor is a deep problem and one that is becoming harder to solve every year. We think the growth of socialism has a great deal to do with the don't-care-a-damn-ness of the average laborer. The flaunting of wealth, newspapers teeming with the doings of the idle rich and the fact that thousands of people who have profited by the sweat of labor are trying to and are succeeding in creating a class who hold themselves above the common herd is constantly making the thinking workman wonder why people should live in idleness and spend the millions in luxurious living and buying titles of worn-out, blase foreign noblemen (?) for their fashionable daughters. They say, 'Why should these people, many of whom never earned an honest dollar in their lives, live at their ease on the profits of my labor?'

"The more he thinks along these lines the less heart he has to put forth his best efforts, and he soon becomes one of the dissatisfied grumblers, and does only enough work to hold his job. Every newspaper item concerning the doings of some of the four hundred at Newport or in foreign lands is a strong argument in the hands of the labor agitator for stronger unions and less work for larger pay for the workman. It is a stock argument, and manifestly a true one, that if more of the profits of toil went to the toiler the

less our new aristocracy would have to give monkey dinners and make millionaires out of gambling-house keepers.

"The recent disclosures of the adulteration and bad conditions generally of our food and drink products is causing dissatisfaction among laboring people. *** The laboring man says: 'You rob us of our just wages and then rob us again by selling us food that is doctored and adulterated until it is unfit for human use.' All these things make the workman dissatisfied and consequently a poorer workman, because he knows he is not receiving what he is justly entitled to receive."

Paper from Cotton Stalks.

Mr. W. P. G. Harding, president of the First National Bank of Birmingham, who is one of the directors of the Cotton Stalk Products Co., recently reported in the MANUFACTURERS' RECORD as having been organized to make paper out of cotton stalks, is reported in the Birmingham Age-Herald as having returned from a meeting of the directors held in Atlanta Saturday last, at which it was decided to build the first demonstrating plant in Montgomery. Speaking of this and of the plans of the company Mr. Harding said:

"The press dispatches made a mistake in what they stated. Birmingham was not making a fight to secure the location of this demonstrating plant, for we recognized the fact that we do not raise enough cotton in this immediate vicinity to furnish the plant with stalks. We would have had to use the railroads too much in securing the stalks, and that would have added to the expense of the plant. We choose Montgomery, as that city is situated in the center of a country that produces very fine stalks in large quantities, and because other conditions were favorable. Should this plant in Montgomery prove a success, we will establish a number of them in the South. The Montgomery plant is not an experimental proposition in any sense of the word. The experimental plant is located in the North, and has been in operation for some time. The patents for making paper and other by-products from the stalks are held by W. W. Gibbs, a street-car magnate in Pittsburg, and he erected the first plant. We expect to put about \$100,000 into the plant in Montgomery and to use the other \$100,000 we will raise as working capital. It is probable that a small amount of this \$200,000 will be subscribed in Birmingham, but when we are ready to erect more plants more of the stock will be disposed of. Montgomery will subscribe \$25,000 towards this first plant, as the Montgomery people were anxious to get the plant established there. It will be enlarged later as the plan works itself out and as it proves successful. The company has no relation with the Southern Cotton Association. Harvie Jordan is president of the Cotton Stalks Company, and is also president of the Cotton Association, but the two are in no way connected. We expect to manufacture paper of a good quality from the stalks, and also to get alcohol and other by-products. The persons interested in the company in Birmingham are W. H. Hassinger and myself."

Wants Privileges for Internal-Combustion Engines.

One of the leading manufacturers of all kinds of light and heavy machinery is desirous of acquiring the privileges to manufacture internal-combustion engines. The manufacturer referred to is well known throughout the country, and is prepared to correspond with inventors or others in control of patents for a practical internal-combustion engine. Letters addressed to "Internal Combustion," care of MANUFACTURERS' RECORD, will be forwarded.

Plans to Develop Texas City.

It is stated that New York and Pittsburg capitalists are planning to fully develop the resources of Texas City, on the west shore of Galveston bay, northwest of Galveston. Their purpose is to extend and improve the shipping facilities of Texas City, so that it will be in a position to handle a large amount of trade. At present there are two piers at Texas City, 300 and 463 feet broad, extending 800 and 1200 feet into Galveston bay; also five warehouses. The new developments will be undertaken by the Texas Investment Co., now being formed with a nominal capital stock, which will be increased to \$10,000,000 or more if necessary. This company purchases the Texas City Terminal Co. and the Texas City Transportation Co., including a nine-mile railway with equipment and 1200 acres of land on the waterfront. The interested capitalists are said to be Messrs. Charles M. Schwab of New York, J. R. McGinley of Pittsburg, vice-president of the Columbia Trust Co. of New York; H. H. Westinghouse of New York, vice-president of the Westinghouse Air Brake Co.; John F. Miller of Pittsburg, connected with Westinghouse interests; J. S. Keiff of Pittsburg, of the American Steel & Wire Co., and A. B. Wolvin of Duluth, Minn., heretofore interested in the development of Texas City. Referring to this important deal Mr. John F. Miller of the Westinghouse Electric & Manufacturing Co. wires from Wilmerding, Pa., to the MANUFACTURERS' RECORD as follows: "New interests now committed to make Texas City as great a port as its unequalled situation and physical characteristics justify are represented by the board of directors of the new company, which includes Charles M. Schwab, J. R. McGinley, H. H. Westinghouse, A. B. Wolvin and myself. Details of all the contemplated improvements are not yet ready for announcement, but arrangements have been completed for the construction of the largest dry-dock on the coast and for the extension of the Texas City Terminal Railway to connect with the Santa Fe and the Rock Island systems, etc."

Table and Casket Factory Wanted.

The city of St. Joseph, Mo., is steadily advancing in general manufacturing, and its business men are now giving especial attention to industrial enterprises. Just at present there is said to be an excellent opportunity in St. Joseph for the establishment of a plant to manufacture extension tables and caskets, and local dealers are willing to become financially interested in such an enterprise. Full particulars can be obtained by addressing the Business Men's League, St. Joseph, Mo.

Wants to Represent Manufacturers.

The MANUFACTURERS' RECORD is advised that G. E. Wilcox of 208 21st street, Sharpsburgh Station, Pittsburg, Pa., wants to represent manufacturers. Mr. Wilcox invites correspondence in this connection, and states that entirely new propositions are especially invited.

A board of trade has been organized at Basic City, Va., with Messrs. M. W. Quarles, president; George Craig and C. E. Moore, vice-presidents; W. H. Page, secretary, and W. H. Gardner, treasurer.

The Robinson Transit Co. has been incorporated at Vicksburg, Miss., to operate a line of motor cars and wagons; capital, \$20,000. Mozart Kauffman, Mrs. Stella Robinson and others are interested.

Most of the 57,385 short tons of fluor-spar produced in the United States in 1905 came from Kentucky and Illinois, Kentucky producing 22,694 tons and Illinois 33,275 tons.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS' RECORD. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

The Peerless Manufacturing Co.

Another cotton mill will be established at Lowell, N. C. It will be erected and equipped by the Peerless Manufacturing Co., which has just been incorporated with a capital stock of \$200,000, of which \$100,000 is already been subscribed. The incorporators are Messrs. John C. Rankin, S. M. Robinson and Frank Robinson of Lowell; W. C. Wilkinson, J. A. Durham, John M. Scott, George E. Wilson, O. P. Heath, J. H. McAden and W. F. Dowd of Charlotte, N. C. They have purchased site, a 50 acre tract of land, and will erect mill buildings large enough to accommodate 10,000 spindles, but will probably not install this number to begin with. Electricity will be used as the motive power, and No. 40 to 60 yarns will be manufactured.

The Warioto Cotton Mills.

Preparations are now being made to install the machinery for the Warioto Cotton Mills of Nashville, Tenn. This company has been referred to several times by the MANUFACTURERS' RECORD. It purchased the old Tennessee Cotton Mills property, and is now dismantling the machinery, so that the new equipment, which will consist of 20,000 spindles and 500 looms, etc., can be put in position. Contracts have been awarded for this machinery. The Warioto Cotton Mills has a capital stock of \$200,000, and its officers include Jo B. Morgan of Nashville, secretary-treasurer, and W. R. Odell of Concord, N. C., president.

First 1906 Cotton Ginned.

Mr. Jeff N. Miller, vice-president and general manager of the St. Louis, Brownsville & Mexico Railroad Co. at Kingsville, Texas, on July 5 said to a representative of the MANUFACTURERS' RECORD: "The first bale of new cotton from Falfurrias, sent to Galveston by express yesterday, sold for \$100. Rain yesterday and conditions fine. Two bales of cotton were ginned at Olmito, a few miles from Brownsville, today, and will be shipped to Houston tomorrow. This was the first cotton ginned in the United States, so far as heard from, for the season of 1906."

The Patterson Manufacturing Co.

It is reported that the Patterson Manufacturing Co. of China Grove, N. C. is preparing to begin the erection of an additional cotton mill. The company was referred to in the MANUFACTURERS' RECORD of March 15 as contemplating this enlargement, the directors having met and recommended that the stockholders vote on a proposition to increase authorized capital stock from \$200,000 to \$500,000, and the paid in capital from \$165,000 to \$350,000. The company now has a plant of 9296 spindles and 158 looms.

The Capitola Cotton Mill.

The Capitola Manufacturing Co. of Marshall, N. C., referred to last week as having awarded contract for new machinery, will not erect any additional buildings. Its present buildings were originally designed for 10,000 spindles, therefore there will be sufficient space for the installation of the 5000 spindles, increasing equipment

to 10,000 spindles. The funds for the additions will be provided by an issuance of some new stock and the past earnings of the present mill.

The Eagle & Phenix Mills.

More improvements will be made to the Eagle & Phenix Mills of Columbus, Ga. The company has decided to award contracts for considerable new machinery, partially to displace old equipment and partly to increase present productive capacity of the mill. Its new apparatus will include 16,000 spindles, and the expenditure is reported as to be \$60,000. This mill is now operating 68,204 spindles and 2064 looms.

Werres & Hinton Silk Dye Works.

The Werres & Hinton Silk Dye Co. of Petersburg, Va., referred to last week as incorporated with an authorized capital stock of \$200,000, takes over and will continue the plant of Werres & Hinton, equipped for dyeing silks, velvets, etc. The company has organized with H. P. Stratton, president; John H. Werres, vice-president and general manager, and F. H. Heinemann, secretary-treasurer.

Pickens Mill Awards Contracts.

Messrs. John F. Grandy & Son of Greenville, S. C., have been awarded the contract for the erection of the buildings for the Pickens Mill of Pickens, S. C. This company was lately reported at some length by the MANUFACTURERS' RECORD. It has organized for the purpose of building a cotton factory of 15,000 spindles and 450 looms. Its president is W. M. Hagood of Easley, S. C.

Knitting Mill Incorporated.

The Watauga Hosiery Mills Co. of Johnson City, Tenn., has been incorporated with a capital stock of \$10,000 by Messrs. L. W. Wood, L. P. Wood, Frank Taylor, T. A. Cox and S. T. Millard.

Textile Notes.

The Jefferson (Ga.) Cotton Mills contemplates adding a 60 per cent. addition to its present plant, which operates 5000 spindles and 114 looms.

It is reported that Bert Weil, formerly manager of the People's Cotton Mills of Montgomery, Ala., will organize a company to build a cotton factory in that city.

It is reported that Messrs. W. A. Powell, J. J. Powell and W. W. White will organize a company with capital stock of \$20,000 to build a knitting mill at Boykins, Va.

The Cooleemee (N. C.) Cotton Mills is to install a system of water-works for supplying pure drinking water to its 2500 employees. This plant will be operated by power from plant already in position. Mr. C. M. Miller of Salisbury, N. C., is engineer in charge of the water-works construction. The mill has 39,168 spindles and 1296 looms.

Increasing Capacity of Plant.

Announcement is made that the Refuge Oil Co. of Columbus, Miss., has let contracts for a new building and the installation of mechanical equipment for doubling the capacity of its present plant, giving it a daily capacity of 250 tons. About 150 operatives will be employed.

The Business Men's League of Helena, Ark., J. W. Burks, Jr., industrial commissioner, is circulating an attractive booklet, "The City With a Future," telling what Helena has in the way of advantages, what it has accomplished and what it wants. A striking feature of the booklet is a bit of green ribbon bound in the middle and bearing the golden words "Helena Wants You."

MINING

Kentucky's Coal Output.

A summary of statistics relating to the production of the commercial coal mines of Kentucky has been prepared by Chief Mine Inspector C. J. Norwood, and shows that an aggregate of 8,038,646 short tons were produced in 1905, the output of each mining district being as follows: Western, 4,681,457 tons; Southeastern, 2,779,559 tons, and the Northeastern, 577,630 tons. Included in this aggregate were 88,416 tons of cannel coal. These figures show an increase over the output of 1904 of 871,322 tons. The total selling value of the commercial coal (bituminous and cannel) at the mine amounted to \$7,810,154, an average of something more than 97 cents per ton. Of the total amount of coal shipped from the mines, 52.82 per cent. went to other States. Nearly 55 per cent. of the output for 1905 was mined by machines used by 51 companies in 71 mines and distributed among 17 of the 25 counties producing commercial coal. The total number of machines used was 501, and of the amount of coal mined, 2,287,814 tons were cut by air-driven machines and 2,128,525 tons by electrical-driven machinery. Of the counties that employ mining machinery extensively, Hopkins leads with respect to its machine-mined coal as compared with the total production. Of the other important counties in which machinery is used, Muhlenberg, Ohio, Knox, Bell and Whiteley are prominent. The total coal production for 1905 was the output of 174 companies, operating 229 mines and employing 15,032 operatives, of whom 11,990 worked under ground. In the production of coke, Kentucky's output amounted to 65,475 tons, produced by 442 ovens, using 145,901 tons of coal.

Southern Asbestos.

The output of asbestos in the United States last year was 3100 short tons, valued at \$42,975, representing an increase of more than 100 per cent. in quantity and of almost 67 per cent. in value over the output of the preceding year. This increase, according to a report of Mr. George Otis Smith of the United States Geological Survey, is due in part to new producers, but more largely to the greater output of the Georgia and Virginia operators. The asbestos from these two States constitutes two-thirds of the total domestic production, and is wholly of the amphibole variety, and much of it of low grade. This will serve to explain the decrease in value per ton, the 1905 average value being \$13.82, as opposed to \$17.40 in 1904. There was, however, a slight increase in the production of the chrysotile variety, which commands better prices.

New River Shipments.

Shipments of coal from the New River district of West Virginia for June did not reach the aggregate of May's shipments by about 41,000 tons, the decrease being regarded as due to the scarcity of labor at the mines. Inland shipments show an increase over those of May, with 1250 cars loaded for Northern and Western points and 7791 cars for tidewater. The total number of tons loaded during the month was 501,120, while the shipments of coke aggregated 557 cars, distributed as follows: Quinimont, 38; Beechwood, 13; Stone Cliff, 22; Macdonald, 15; Turkey Knob, 52; Sun, 13; Collins, 8; Harvey, 14; Fire Creek, 44; Ansted, 156; Rush Run, 29; Brooklyn, 35; Kaymoor, 118.

Lands Purchased.

A dispatch from Mt. Pleasant, Tenn., states that Messrs. H. D. Ruhm and E. L. Gregory have purchased a 160-acre tract of phosphate land from L. B. Mat-

threws for \$12,000, and, with Messrs. J. A. Cebie, John Garrett, E. Dan Smith, D. W. Shofner and J. S. Hill, have purchased a tract of 206 acres from W. M. Rea for \$18,000. Both of these properties are located near Southport, and will be developed by a company which the purchasers contemplate organizing. It is understood that options have also been secured on other properties in this locality, and investigations are now being made to determine the feasibility of purchasing them. Mining operations will be commenced at once on the properties bought, development work to be conducted by John Garrett, Messrs. Ruhm and Gregory acting as sales agents.

Missouri's Coal Output.

According to a summary of coal-mining operations in Missouri during 1905, as compiled by J. M. Marsteller, secretary of the bureau of mines, there are 37 counties in the State producing coal from 488 mines. The coal mined shows a total of 4,379,000 tons, valued at \$7,141,983, the tonnage and value both being in excess of that of any previous year. There was an average total of 10,401 men employed in and about the mines during the year. Of the counties having the largest production, Macon is credited with 815,893 tons; Adair, 708,388 tons; Lafayette, 705,917 tons; Randolph, 554,118 tons; Ray, 226,369 tons; Vernon, 206,772 tons, and Platte, 205,535 tons.

Big Purchase of Alabama Coal Lands

Referring to the reported purchase of 17,000 acres of coal lands in Alabama by J. F. Hanson, president of the Central of Georgia Railway Co., and associates, the MANUFACTURERS' RECORD is advised that definite details as to the development of the property will probably not be announced for two or three months. The property is located in Walker and Jefferson counties and has never been developed, but is said to contain coal deposits of a high grade. Messrs. G. B. McCormack, L. B. Musgrove, T. G. Bush and others of Birmingham are understood to be interested in the transaction. The purchase price is stated at more than \$1,000,000.

Gypsum Products.

The Roman Nose Gypsum Co. of Bickford, Okla., has incorporated with a capital stock of \$150,000 for the purpose of establishing a plant for the production of high-grade gypsum products. A building has already been erected, and the necessary machinery for the plant is being installed. Its capacity will be about 200 tons per day. Mr. Charles N. Bancroft is manager and G. Heller, engineer in charge.

Coal Lands in Arkansas.

The Franklin Coal Co. of Denning, Ark., has under construction a mining plant, to have a capacity of 500 tons per day, for the development of about 360 acres of coal lands. Contracts for construction work and necessary mechanical equipment have already been awarded. Officers of the company are Messrs. Fred Randle, president; Will Cheek, vice-president; J. D. Crockett, secretary-treasurer.

Mining Notes.

Messrs. Charles O. Austin, Frank B. Wilcox and associates have incorporated the Chitwood-Joplin Zinc Co. of Joplin, Mo., with a capital stock of \$100,000, for the purpose of developing zinc deposits.

Messrs. W. G. Matthews, M. M. Williamson, F. M. Carnes and associates have incorporated the Cheylan Land & Coal Co. of Charleston, W. Va., with an authorized capital stock of \$300,000, for the purpose of mining coal, manufacturing coke, etc.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

NEW RAILROADS IN TEXAS.

Since January 1 More Than 250 Miles of Line Have Been Built.

Reports from Austin, Texas, say that statements received by the State Railroad Commission show that mileage has been constructed on various railroads in Texas during the first six months of 1906 (figures being approximate) as follows:

Beaumont & Great Northern Railroad, between Trinity and Onalaska, 15.7 miles; Galveston, Harrisburg & San Antonio Railway, Stockdale southeast, 38.3 miles; Houston & Texas Central Railroad, between Mexia Junction and Jewett, 27 miles; Kansas City, Mexico & Orient Railway, between Sweetwater and Knox City, 21.9 miles; Pecos & Northern Texas Railway, Canyon City south, .8 mile; St. Louis, Brownsville & Mexico Railway, between Refugio and Algoa, 26.6 miles; Trinity & Brazos Valley Railway, Mexia south, 52 miles; vicinity of Bobbin, 25 miles; from Teague north, 12 miles; total for Trinity & Brazos Valley, 89 miles; Wichita Valley Railway, Seymour to Weinent, 33 miles; total, 252.3 miles built since January 1.

Since July 1 of last year, in addition to the foregoing, the Beaumont & Great Northern built 4 miles, the Houston & Texas Central built 1 mile, the Kansas City, Mexico & Orient built 34 miles, the Orange & Northwestern built 31 miles and the St. Louis, Brownsville & Mexico built 101 miles, making a total of 423 miles for the 12 months since July 1 last.

An approximate statement of railroad mileage now being built in Texas is as follows: Galveston, Harrisburg & San Antonio Railway, between Stockdale and Cuero, 8.4 miles; Houston & Texas Central Railroad, Jewett to Navasota Junction, 60 miles; Houston Belt & Terminal Railway, in the city of Houston, 6 miles; Kansas City, Mexico & Orient Railway, between Red river and San Angelo, 158 miles; Pecos & Northern Texas Railway, Canyon City to Plainview, 56 miles; Trinity & Brazos Valley Railway, between Houston and Waxahachie, 138 miles; Texas Central Railroad, Stamford west, 45 miles; Wichita Valley Railway, Weinent to Alibene, 67 miles; total, 544.4 miles.

The total railway mileage in Texas is now given as approximately 12,183 miles. This does not include 250 miles of logging and other private lines—which are not common carriers—nor about 50 miles of electric interurban railway.

THE GULF COAST LINE.

Great Activity Along the Route, Which Will All Be Operated Soon.

[Special Cor. Manufacturers' Record.]
Corpus Christi, Texas, July 9.

The St. Louis, Brownsville & Mexico Railroad will be completed and in operation along its entire length within 60 days. Rolling stock and equipment have been for the most part delivered, and great activity is in evidence everywhere along the system, especially uncompleted portions, in preparation for the rapidly approaching date when one of the most fertile and inviting portions of the Southwest will be opened for traffic. The main line of the St. Louis, Brownsville & Mexico Railroad when completed will be 96 per cent. tangent, two-tenths of 1 per cent. grade, and no curvatures in excess of two degrees. It is claimed for this new system that it is the lowest grade of the entire railroad mileage in the South or Southwest.

Heavy work is now proceeding in the neighborhood of Sinton to carry the grade

through. The main line will be 286 miles in length, connecting Houston, Galveston, Brownsville and Corpus Christi, while the branch line from Harlingen to Sam Fordyce, on the Rio Grande, is 55 miles in extent. There is 87 per cent. of the road now in operation, or from Bay City to Brownsville and Sam Fordyce.

The company has purchased an interest in the spur branch connecting Corpus Christi with their main line. This latter was formerly operated and owned exclusively by the Mexican National Railroad Co. as the terminal of its system in the United States.

There will be seven steel-span drawbridges of the latest and most approved type, oil motive power of the standard oil-burner type, coaches illuminated with electricity, with wide vestibules and embellished throughout with artistic hardwood work, the varnishing and furnishing being of the most perfect class. The highest standard of efficiency is aimed at in every department of the system.

In connection with the Trinity & Brazos Valley Railroad Co. at Galveston and Houston, the St. Louis, Brownsville & Mexico Railroad Co. will expend several million dollars in the construction and equipment of up-to-date freight terminals. This will be done through subordinate corporations—the Houston Terminal & Belt Co. and the Galveston Terminal & Belt Co.

JOHN BANNON.

New Equipment.

The Western Maryland Railroad Co. has ordered 25 heavy consolidation engines from the Baldwin Locomotive Works, delivery to begin December 1. The company is now receiving some of the steel hopper gondola cars and other freight equipment ordered some time ago.

The Missouri Pacific Railway is reported to have ordered 30 locomotives from Baldwin's, and the St. Louis Southwestern has ordered 20 locomotives from the same works.

The Texas & Pacific Railway has ordered 10 locomotives to be built at the Rogers branch of the American Locomotive Co., delivery to begin October 1.

The New Orleans & Northeastern Railway has given an additional order for 115 flat cars and 60 box cars to the American Car & Foundry Co.

The order of the Seaboard Air Line to the American Car & Foundry Co. is for 611 flat cars.

The Mobile & Ohio Railroad, it is reported, will buy 200 gondola cars.

The Illinois Central Railroad is said to be contemplating the purchase of 45 passenger cars.

The Florida East Coast Railway has given a contract for 200 flat cars to the Pressed Steel Car Co.

An order for 20 tank cars has been placed by the St. Louis, Brownsville & Mexico Railway with the American Car & Foundry Co.

The Macon, Dublin & Savannah Railway will, it is reported, purchase 100 box cars. The report that contract was let is denied.

The Virginia-Carolina Chemical Co. has ordered one locomotive from the Baldwin Works.

The Central of Georgia Railway has filed a mortgage for \$2,300,000 covering 40 locomotives to be delivered in October and November, 1000 box cars, delivery to begin this month, and 1000 steel hopper cars, delivery to begin in November next. The Girard Trust Co. of Philadelphia is trustee of the mortgage.

Railroad Reports.

Messrs. Fisk & Robinson, bankers, of New York and Boston, report the Louisiana & Arkansas Railway's statement as follows: For May, 1906, gross earnings,

\$105,308; operating expenses and taxes, \$74,767; net earnings, \$30,541. For May, 1905, gross earnings, \$84,102; operating expenses and taxes, \$47,719; net earnings, \$36,383. For the 11 months ended May 31, 1906, gross earnings, \$956,463; operating expenses and taxes, \$616,914; net earnings, \$339,549. For the same period ended May 31, 1905, gross earnings, \$765,534; operating expenses and taxes, \$471,287; net earnings, \$294,247; surplus, 1906, \$215,700; surplus, 1905, \$185,529.

The Gulf & Ship Island Railroad statement is also reported by Fisk & Robinson. For May, 1906, gross earnings \$201,242; operating expenses and taxes, \$135,182; net earnings, \$66,060. May, 1905, gross earnings, \$163,061; operating expenses and taxes, \$116,714; net earnings, \$46,347. For the 11 months ended May 31, 1906, gross earnings, \$1,953,784; operating expenses and taxes, \$1,324,444; net earnings, \$629,340. For the same period ended May 31, 1905, gross earnings, \$1,710,831; operating expenses and taxes, \$1,281,488; net earnings, \$429,343; surplus, 1906, \$372,450; surplus, 1905, \$154,971.

The Northern Central Railway Co. reports for May, 1906, gross earnings, increase, \$4500; expenses, decrease, \$51,700; net earnings, increase, \$56,200. For five months ended May 31, gross earnings, increase, \$372,300; expenses, decrease, \$27,800; net earnings, increase, \$400,100. Comparisons are made, respectively, with May, 1905, and with the first five months of 1905.

Baxter & Gainesboro Electric.

Mr. J. B. Gentry, president of the Baxter & Gainesboro Electric Railroad & Power Co., writes from Baxter, Tenn., to the MANUFACTURERS' RECORD concerning the railway plans as follows:

"The proposition was that Jackson county was to furnish \$50,000 of the money to develop the falls and aid in the construction of a railroad. The county court voted on the proposition July 2 and rejected it—18 against, 9 for. Consequently the project will lay over until the court meets in October next.

"The amount of horse-power will be about 10,000. We have not employed an engineer as yet, as the proposition will not be carried out unless the county aids in the enterprise."

The directors of the company are J. B. Gentry, president; R. B. Gentry, treasurer, Baxter, Tenn.; W. H. Johnston, secretary, Silver Point, Tenn.; J. C. Gentry and R. R. Gentry, both of Baxter. The vice-president and the general manager have not yet been elected, the company not being fully organized, and it will probably not begin business until January 1 next. The line will be about 18 miles long, and will open up rich farming and timber lands.

Georgia Central's Gulf Road.

Concerning the plan to build a line from Albany, Ga., to Apalachicola, Fla., an officer of the Central of Georgia Railway writes from Savannah, Ga., to the MANUFACTURERS' RECORD that at present only a preliminary survey is being made, with Mr. C. K. Lawrence, chief engineer, in charge.

The name of the new line, recently chartered, is the Georgia Central & Gulf Railway.

Southern Street Railway Merger.

The American Cities Railway & Light Co. is the name of the corporation formed by Isador Newman & Sons of New York and New Orleans for the purpose of taking over the firm's various railway and lighting companies in different Southern cities as follows: The Birmingham Railway, Light & Power Co., the Memphis Street

Railway, the Nashville Railway & Light Co., the Little Rock Railway & Electric Co., the Knoxville Railway & Light Co. and the Houston Lighting & Power Co.

The capital stock of the new corporation, it is said, can be increased from \$15,000 to \$27,500,000, of which \$10,000,000 will be cumulative preferred stock and \$15,000,000 common stock, this to be exchanged for the stock of the various railways and lighting companies here named, while \$2,500,000 will be held for future requirements.

It is said that J. K. Newman will be president of the new company.

Clinton, Cheyenne & Canadian.

Mr. R. V. Converse, secretary of the Clinton, Cheyenne & Canadian Interurban Railroad Co., writes from Cheyenne, O. T., to the MANUFACTURERS' RECORD that the construction proposed is from Clinton, O. T., to Canadian, Texas, 150 miles, with a branch from Cheyenne to Mangum, O. T., 70 miles. Connection will be made at Clinton with the Rock Island and Frisco systems and with the Kansas City, Mexico & Orient Railway. At Canadian, Texas, a connection will be made with the Santa Fe system. The line will run through a very fertile valley of the Washita river, and the company is ready to receive bids for the preliminary survey and estimates. It is expected to have the line in operation in one year. The officers are C. S. Gilkerson, president; L. L. Collins, vice-president; R. V. Converse, secretary and treasurer, the other directors being W. T. Bonner and L. W. Pate.

Liberty-White Extensions.

Mr. J. Turner Burke, engineer of construction of the Liberty-White Railroad Co., writes from McComb, Miss., to the MANUFACTURERS' RECORD thus:

"The route of the Natchez extension of the Liberty-White Railroad to points west of Liberty, Miss., has not been decided. The J. J. White Lumber Co., which is composed of the officers of the Liberty-White Railroad Co., owns considerable timber west and northwest of Liberty, and it is undecided whether it will build via Gloster or Roxie, on the Mississippi Valley Railroad. Surveys are not completed and bids have not yet been advertised for. The Liberty-White Railroad will complete construction on the extension to Columbia, Miss., and be in operation to Holmesville, Miss., by August 1, this being 10 miles from McComb."

New Work on the Missouri Pacific.

The Missouri Pacific Railway reports that it has laid about five miles of track on the Gurdon & Fort Smith branch from a point near Antoine, Ark., where it connects with the Arkansas Southwestern Railway, and whence it will extend to a point near Caddo Gap, Ark., 34 miles. No track has, however, been laid on the Gurdon & Fort Smith Northern Railroad, which is to run from near Caddo Gap northwest to Ouachita river, 28 miles. On the 90-mile branch from Eudora, Ark., to Gilbert, La., about two and one-half miles of track have been laid. No tracklaying has yet been done on the Springfield Southwestern Railway, which will be 33 miles long from Springfield to Crane, Mo.

A Colorado Summer.

One of the most enticing pieces of summer excursion literature is a new folder issued by the Santa Fe system and entitled "A Colorado Summer." The whole arrangement of the thing is excellent, reading matter and pictures being prepared with consummate skill and judgment to attract and persuade the hesitating vacationist. The folder contains much information and will be valued by anyone who

makes a Colorado trip. Special excursion rates are now offered and further information can be obtained from W. J. Black, passenger traffic manager at Chicago.

Jefferson & Braddock Heights.

Mr. J. Roger McSherry, vice-president of the Frederick & Middletown Railway Co., writes from Frederick, Md., to the MANUFACTURERS' RECORD that the Jefferson & Braddock Heights Railway Co. is the correct name of the corporation recently formed by him and others, and which contemplates building a line five miles long from Jefferson to Braddock Heights, Md., connecting at the latter point with the Frederick & Middletown Railway. The engineering work is being done by Westinghouse, Church, Kerr & Co., 10 Bridge street, New York.

Appointments.

F. G. Pettibone, general superintendent of the Gulf, Colorado & Santa Fe at Galveston, has, according to a report from Chicago, headquarters of the Santa Fe system, been appointed vice-president and general manager to succeed W. C. Nixon, who resigned to become vice-president and general manager of the Frisco system. The appointment takes effect August 1.

The Virginia & Carolina Coast Railroad Co. announces the appointment of Mr. W. L. Bird as auditor, vice Mr. J. C. Nelms, Jr., who has accepted service with another company.

Report of Sale Confirmed.

Mr. E. P. Rentz writes from Dublin, Ga., to the MANUFACTURERS' RECORD confirming the report that the Dublin & Southwestern Railroad has been sold to the Wrightsville & Tennille Railroad Co.

Railroad Notes.

A dispatch from Pensacola reports the announcement that the Louisville & Nashville Railroad has taken over the Yellow River Railroad, running from Crestview, Fla., to Florida, about 30 miles.

The Velasco, Brazos & Northern Railway, sold at Velasco, Texas, at receiver's sale, was purchased by C. H. Alexander, president of the company, at \$80,000. The line is 20 miles long from Anchor, Texas, on the International & Great Northern Railroad, to Velasco, Texas.

The sale of the Wetzel & Tyler Railway Co.'s properties by H. P. Camden, special commissioner, is advertised to take place on July 24 at Parkersburg, W. Va. The Wetzel & Tyler Railway is an electric line running from Sistersville to Paden City, but it also has right of way beyond Paden City to Brooklyn, W. Va.

The Kansas City Southern Railroad is reported to be pushing work on the rebuilding and ballasting of its track between Kansas City and Texarkana. President J. A. Edison is quoted as saying: "We have laid 7000 tons of 85-pound steel rails in the last few months. We have just received 20,000 tons of new rails, which we will lay as rapidly as possible."

An unconfirmed press report from Nashville, Tenn., says that the Frisco system will build a line to that city or it may build further northward via Nashville. The talk is that the line will run from Baton Rouge, La., via Jackson, Miss., to the Tennessee capital. Should it continue further it is believed that it will go to the Ohio river, perhaps to Evansville, Ind., or Joppla, Ill.

The two leading topics for discussion at the annual meeting in December of the Tennessee Board of Trade will be good roads and desirable immigration.

It is estimated that the assessed value of property in Oklahoma is now \$100,000,000.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Building Record Good.

As evidenced by reports from representative cities of the South and Southwest, building operations throughout these sections are very active, and a substantial increase in the number and value of structures is shown. In Memphis, Tenn., operations for June show an aggregate value for construction, as estimated by permits issued, to be \$506,044, as compared with an aggregate of \$343,200 for May. From January 1 to July 1 there was a total of 1373 permits issued, representing a value of \$2,511,276, as compared with \$1,955,324 for the corresponding period last year. The records at Little Rock, Ark., show that the total value of building operations in that city for June amounted to \$323,360.20, as against a total of \$119,171.60 for May. For the six months ended June 30 the aggregate value of buildings for which permits were issued is estimated at \$706,109. During the first six months of the year 207 permits were issued by Building Inspector Holland of Norfolk, Va., the estimated value of the structures being \$1,047,972. In Galveston, Texas, City Secretary Kelley issued permits to the number of 207 during the first six months of the year, with a value of \$215,538. Permits were issued in El Paso, Texas, to the number of 51 for June, valued at \$107,425. In Knoxville, Tenn., the value of permits issued during June aggregated \$111,850, an increase of about \$35,000 over the corresponding month last year. For the six months ended June 30 the total value of buildings, as indicated by the permits, is estimated at \$815,044. During June Building Inspector Ashford of the District of Columbia issued permits to the number of 494, with an estimated value of \$1,138,647. Records in the office of City Building Inspector LeRoy L. Bristol of Dallas, Texas, show that during June 130 permits for buildings were issued, valued at \$691,777. Since January 1, 1906, 888 permits have been issued, with an aggregate valuation of \$1,416,005. This shows an increase over the corresponding period of last year of about 51 per cent.

Buys Mill and Lands.

A deal of more than ordinary magnitude has been consummated at Houston, Texas, by the purchase by J. Lewis Thompson of the Thompson-Tucker Company and the J. M. Thompson Company of the sawmill plant of the Emporia Lumber Co. at Doucette, Texas, together with valuable timber lands and other properties, the purchase price being \$1,000,000. It is contemplated to organize the Thompson Bros. Lumber Co. for the operation of this plant, the officers being Messrs. J. Lewis Thompson, president; Hoxie H. Thompson, vice-president; Liggett N. Thompson, secretary, and Alexander Thompson, treasurer and manager. The plant, it is announced, will be operated without interruption and the output handled by the Thompson-Tucker Company of Houston, whose sales offices will be located in that city in charge of Mr. Liggett Thompson, the secretary of the three companies referred to. With the acquisition of these properties the Messrs. Thompson are said to own 160,000 acres of virgin timber lands, estimated to cut 1,000,300,000 feet of lumber. Mr. S. F. Carter, president of the Emporia Lumber Co., conducted negotiations for his company.

Erecting Sawmills.

The Flynn Lumber Co. of Charleston, W. Va., is installing a new eight-foot band-saw mill, daily capacity from 40,000 to 45,

000 feet, at Swiss, on the Gauley branch of the Chesapeake & Ohio Railroad, four miles from Belva. The products will largely be oak and poplar. The company owns 10,000 acres of land, and calculates on 10 years' run. The mill is expected to be finished in August. Mr. James Flynn, president of this company and of the Mountain City Lumber Co., announces that the Mountain City Lumber Co. has practically completed a new mill on Campbell's creek, near Dana, on the Kanawha & Michigan Railroad, 10 miles southeast of Charleston. An eight-foot Prescott band mill is being installed with 40,000 feet daily capacity. It is calculated that 20,000,000 feet of timber is available here, and after it is cut the mill will be moved to Hominy creek, about 80 miles further north, where the company owns 8000 acres of timber land.

Timber Deal in North Carolina.

Messrs. John C. Arbogast of Lake Charles, La., and B. M. Yager of Marlinton, W. Va., are reported from Asheville, N. C., as having transferred to W. S. Harvey of Philadelphia, Pa., and H. Winchester of Buchanan, W. Va., the timber lands of the Smoky Mountain Company, together with other adjacent tracts. The properties are said to be well timbered with virgin forests, and are located in Swain county, North Carolina, and Sevier county, Tennessee, and contain a total acreage of more than 30,000. It is understood that the purchasers will transfer the land to the Southern Spruce Co., recently incorporated in New Jersey. Messrs. Henry B. Stevens and John B. Anderson of Asheville conducted negotiations for the purchasers.

Buys South Carolina Timber Land.

Regarding its purchase of timber lands near Sumter, S. C., the Richland Lumber Co. of Bristol, Va.-Tenn., J. H. Bryan, president, advises the MANUFACTURERS' RECORD that it has purchased 2250 acres which are estimated to cut 16,000,000 feet. The company contemplates the erection of a portable sawmill to have a capacity of 20,000 feet per day, and has already placed orders for the equipment. The timber consists of hardwoods, including white oak, white cane ash and red gum. The purchase price is approximately stated at \$20,000.

Big Timber-Land Purchase.

An important deal in West Virginia timber lands is reported to have been consummated at Bluefield last week by the formal transfer of 31,630 acres to the W. M. Ritter Lumber Co. of Welch, W. Va., and Columbus, Ohio. The property is located on the Guyan river in Raleigh and Wyoming counties, and is said to be practically a virgin forest of high-grade timber. It is stated that the lands are underlaid by seams of Pocahontas coal. The purchase price is understood to have been about \$500,000.

Lumber Notes.

A total of 4,354,379 feet of lumber was cut during May by the Sawyer-Austin Company at Pine Bluff, Ark.

The Norwegian bark Java is loading a cargo of more than 1,000,000 feet of lumber from W. Denny & Co.'s O'Leary mill at Moss Point, Miss.

The Mexican Central Railroad Co. has placed an order with the West Pascagoula Creosoting Works of Pascagoula, Miss., for 1,000,000 feet of telegraph poles and crossarms.

It is reported that J. S. Bacon of the J. S. Bacon Lumber Co., Cincinnati, Ohio, and associates have purchased 15,000 acres of timber land in Louisiana, near Bastrop, and will erect a band-saw mill for its development.

MECHANICAL

Duntley Portable Electric Drills.

The success of a portable tool depends upon its ability to perform the work for which it was designed with the greatest dispatch and the least energy, ease of manipulation and freedom from liability to break down under hard usage and rough handling. The success attained during the past several years by the Duntley portable electric drills has brought requests for detailed mechanical and electrical descriptions of the construction of these tools.

The drills are built in three distinct types, each adapted to its own particular class of work, but all embodying practically the same mechanical features, dif-

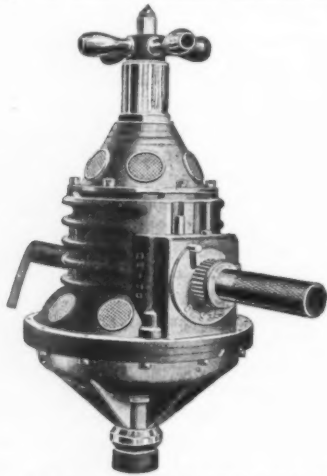


FIG. 1—DUNTLEY PORTABLE ELECTRIC DRILLS.

fering only in the design and general arrangement of the electrical parts. These three types are known as the single-motor, two-motor and three-motor drills, respectively.

The single-motor drill, adapted to all classes of general work for drilling in iron or steel up to $1\frac{1}{4}$ inches diameter, is, as its name would signify, provided with one revolving electrical element or armature. An accompanying illustration, Fig. 1, is a general view of the single-motor drills, ranging in size from $\frac{3}{8}$ inch capacity for the breast drill to $1\frac{1}{4}$ inches capacity for the 1-M-3-19. The magnetic field casing is a steel casting of high permeability, to which are bolted the drop-forged pole-pieces. The armature is of the slotted

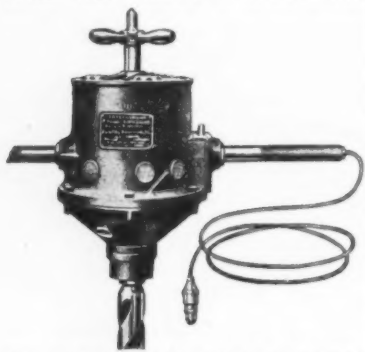


FIG. 2—DUNTLEY PORTABLE ELECTRIC DRILLS.

type, with hand-wound coils of double silk-covered magnet wire secured in place by means of wedges, no binding wire being used. The commutator is built up of hard-drawn copper bars, insulated with the best grade of amber mica, and the commutator sleeve is of machinery steel. The shaft is of high-carbon steel, with the pinion cut as an integral part of it, and is hardened and ground at the bearings. The bearings are of the most approved ball type, with provision for slight end-play of the armature. Carbon brushes are used.

The handles are of round hollow pipe, located near the line of center of gravity of the drill, and the flexible leading-in

cable is passed through one of these handles. A special quick-break switch is mounted in the drill housing at the base of one of the handles, and is entirely protected from external injury. The switch cuts off all current entering the drill, including the shunt field current, which in some foreign makes of drills is broken only at the cable socket. A reversing switch is furnished when so ordered, and is arranged so that the drill cannot be reversed without first throwing off the current by pushing the "off" button on the switch. The breast drill and 1-M-1-10 drills, having capacities of $\frac{3}{8}$ inch and $\frac{1}{2}$ inch in iron, respectively, are shunt

after 10 hours full-load service will not exceed 35 degree C. or 63 degrees F. above the surrounding air. This is accomplished by the excellent electrical design in connection with a special ventilating system which keeps a stream of cold air pouring through the windings at all times. A fan is provided on the armature shaft and revolves at the speed of this shaft, which is comparatively high and imparts a good velocity to the air. With the larger drills of this type working on $1\frac{1}{4}$ -inch holes in good cast iron one cubic inch of metal per minute can be easily removed. This is equivalent to one inch in depth per minute of $1\frac{1}{4}$ inches diameter.

insuring the same speed for all three armatures (or two as the case may be).

The fields are compound wound, and a very low starting current is required, and at the same time a fairly close speed regulation is obtained. The fans are placed on the upper or commutator ends of the armature, and the air is drawn in here and forced out at the lower end. The electrical construction of the parts, including the switch, is the same in general as for the single-motor drills previously described. The planetary gear arrangement is similar, involving only such modifications as are made necessary by the increase in the number of driving pinions.

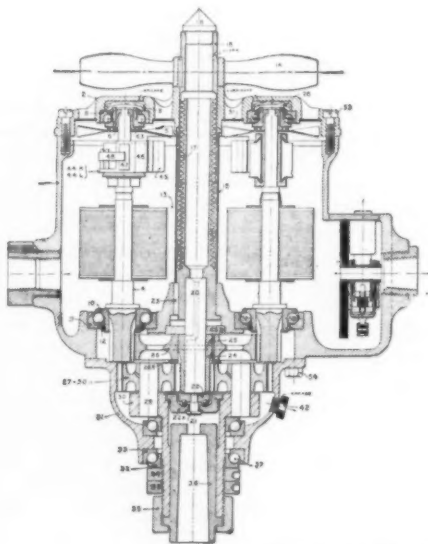
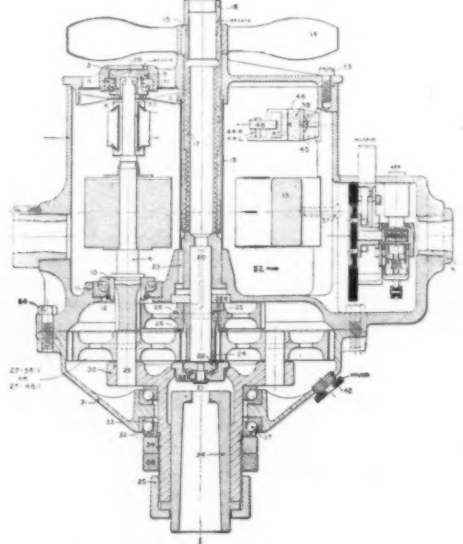


FIG. 3—DUNTLEY PORTABLE ELECTRIC DRILLS.—FIG. 4.



wound, while the larger drills are compound wound.

The diaphragm carries the lower ball bearing and serves to separate the electrical from the mechanical transmission, so as to exclude all oil from the windings.

The drill spindle has ball-thrust bearing, located at the base of the gear-case casting. This system of gearing, introduced in the Boyer air drills, brings into action two teeth of the pinion, balances all strains on the bearings and produces a symmetrical tool with all of the strains in one straight line between the point of the drill and the point of the feed screw.

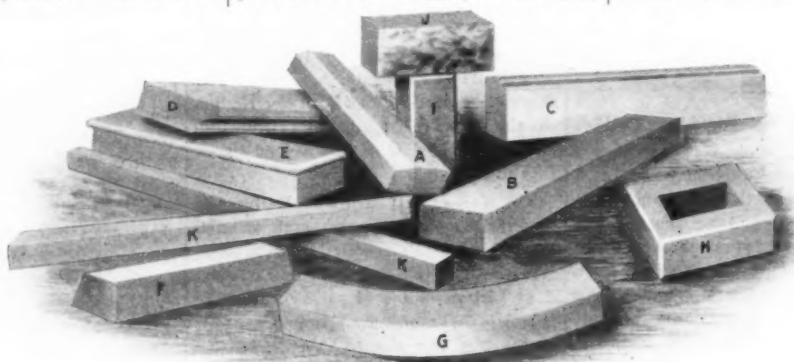
For drills capable of drilling holes larger than $1\frac{1}{4}$ inches diameter, if one armature is used the armature becomes quite large in diameter and the speed must necessarily be reduced to keep down the peripheral velocity. It is for this larger work that the two and three-motor drills become desirable. By the use of two or three small armatures properly geared to the main driving spindle a greater power can be secured for a given weight on account of the higher speeds that the armatures can be run at with perfect safety. This seeming complexity of parts is made perfectly simple and free from liability to trouble by

The two and three-motor drills are, as previously stated, adapted to heavy drilling, and are used for drilling in iron or steel up to $2\frac{1}{4}$ inches, and for boiler-plate reaming and stay-bolt tapping. On large holes they have removed $2\frac{1}{4}$ cubic inches of cast iron per minute with comparative ease.

The Chicago Pneumatic Tool Co., offices in Fisher Building, Chicago, Ill., manufactures the Duntley tools.

The White Cement Machinery.

It is not only for the manufacture of building bricks and kindred articles that



A, Window Sill; B, Window or Door Cap; C, Water Table; D, Coping; E, Step; F, Sewer-Pipe Section; G, Silo Block; H, Chimney Block; I, Plain Block, Block Mold; K, Fence Post made on Fence-Post Mold.
MADE WITH WHITE CEMENT MACHINERY.

Provision is made for the application of grease to the gears, which are all hardened by special process. The gears, when running at their normal peripheral speed of about 475 feet per minute, are noiseless, and on a drill capable of drilling $1\frac{1}{4}$ holes in iron or steel the energy required to drive them up to this speed empty is about 18 watts, or one-fortieth of a mechanical horse-power. The total energy required by this drill running empty at full speed is 83 watts, or one-ninth horse-power, including all mechanical and electrical losses. The temperature rise of the drill

the special design and the superior construction used on these drills.

Fig. 2 shows the general outside appearance of the two-motor drill. Figs. 3 and 4 are sectional views of the two and three-motor drills, respectively. Since the construction of these drills is somewhat analogous, they will be described together. The plan arrangement of the armatures and fields are peculiar to the Duntley drills, and constitute one of the most important features. The outer casing is of non-magnetic material. The magnetic flux in each drill in series through the armatures, thus

cement machinery is coming into extensive use. The adoption of cement for the manufacture of fenceposts, drain tiles, sidewalk slabs, sills, steps, silo blocks, chimney blocks and other products is also noted. In the designing and construction of machinery for these latter purposes the White Cement Machinery Co. of Jackson, Mich., is becoming widely known. The company offers machines that will interest people who have need for the manufacture of the articles referred to. It builds the White fencepost mold, the White cement-sill mold, the White sidewalk mold and the White

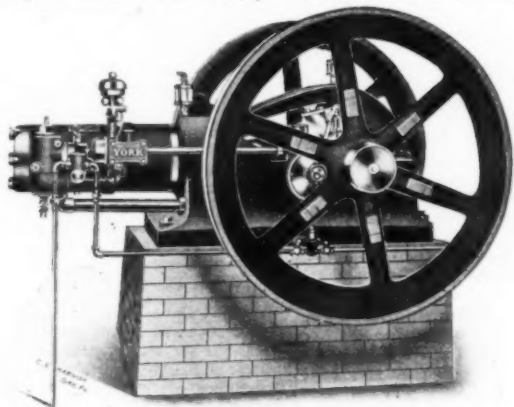
tile mold. An accompanying illustration presents views of the products. The line post made is 7½ feet long by 3 inches square at the top and 4 inches square at the bottom. The corner post made is 8½ feet long by 6 inches square at the top and 8 inches square at the bottom. With fillers furnished with mold brace and stub posts are made. The tile mold is just the thing for farmers' use. The sidewalk-mold products are used for laying sidewalks, porch floors, water tanks, etc. The sill mold produces door and window sills, caps, water tables, copings, steps, silo blocks, sewer and chimney blocks. These machines are claimed to be entirely practical and economical, the results from actual use by purchasers throughout the country having been such as to create a demand that is steadily growing as the merit of the White machinery becomes better known. The White Cement Machinery Co. is prepared to send full details of these improved devices to inquirers.

York Gas and Gasoline Engines.

The time has passed when it was necessary to offer any theories as to the practicability of gas and gasoline engines. Engine designers and manufacturers have so perfected these power machines that they

some new features. All parts are well protected. Material and workmanship are of the highest grade. All bearings are lined with bronze, not having any babbitt metal in use. Crankshaft is forged steel, machined all over. Connecting rod is of stub and strap type, with set-screw adjustments. Valves are poppet type, turned out of the solid steel, making but one piece. Stems are provided with long bearings and so designed that they can be oiled, giving long life and accuracy in seating. Speed of engine can be changed to any number of revolutions desired while engine is in operation and without adjusting fuel regulator. The maker guarantees these engines to develop their full rating power and do the same amount of work, if not more, than the average or all correctly rated steam engines with 100 pounds steam pressure.

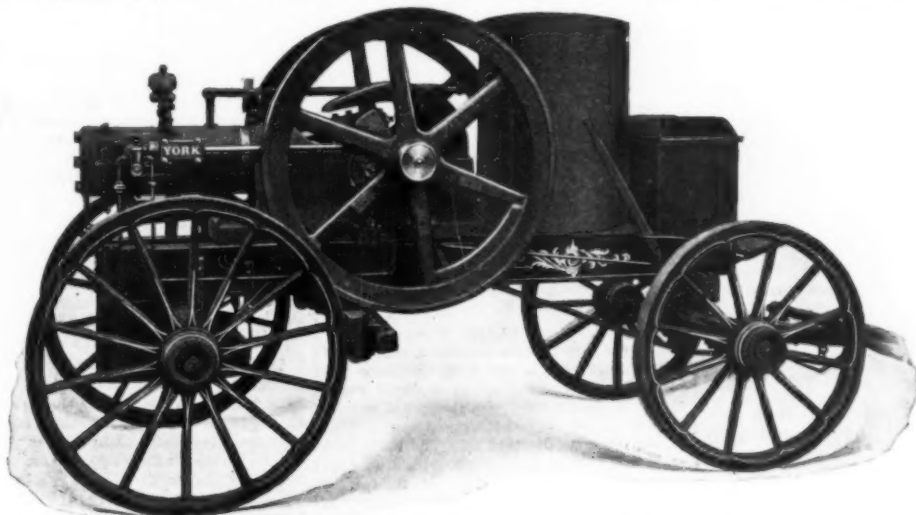
The portable type is self-contained. Water supplies, gasoline tank and batteries all mounted so as to be ready for operation. There is no water pump to freeze fast and break. The water is carried in a tank on truck. All water used or lost is by evaporation, which is from two to three buckets per day. The gasoline tank is carried under rear of truck, a pump being used to get the gasoline to



YORK GAS AND GASOLINE ENGINE—STANDARD HORIZONTAL TYPE.

are now widely used throughout the entire world, and it remains only for the user of power to select that make of engine which best suits his purposes. To aid those contemplating the purchase of gas and gasoline engines the two accompanying illustrations are presented of the standard horizontal and standard portable types of the York gas and gasoline engines

engine, and the surplus not used by the engine is returned to tank. The maker can place tank (if desired) so as to feed gasoline by gravity, but does not recommend this, on account of leaks that may occur in pipe and valves. The exhaust is muffled by a special muffler, so that it cannot be heard 500 feet away from engine. The truck is made of the best material



YORK GAS AND GASOLINE ENGINE—STANDARD PORTABLE TYPE.

built by the Flinchbaugh Manufacturing Co. of York, Pa.

The horizontal type is offered in 3, 4, 6, 8, 10, 13, 16, 20, 25 and 35 horse-power. It is designed with the governor operating on the gas or gasoline admission valve, this feature preventing waste of fuel and giving uniform charges. The sparker has

adapted to that purpose. Wood or iron wheels furnished as buyer desires. Wood wheels are recommended, and will be furnished unless otherwise ordered. In placing the portable engine on a plank or any rigid floor without blocks under wheels or brake drawn, the maker guarantees them not to vibrate over one-eighth of an inch.

This is very important, as it prevents trouble to have an engine set without rocking. Traction and vertical types of the York engine are also built by the Flinchbaugh Manufacturing Co.

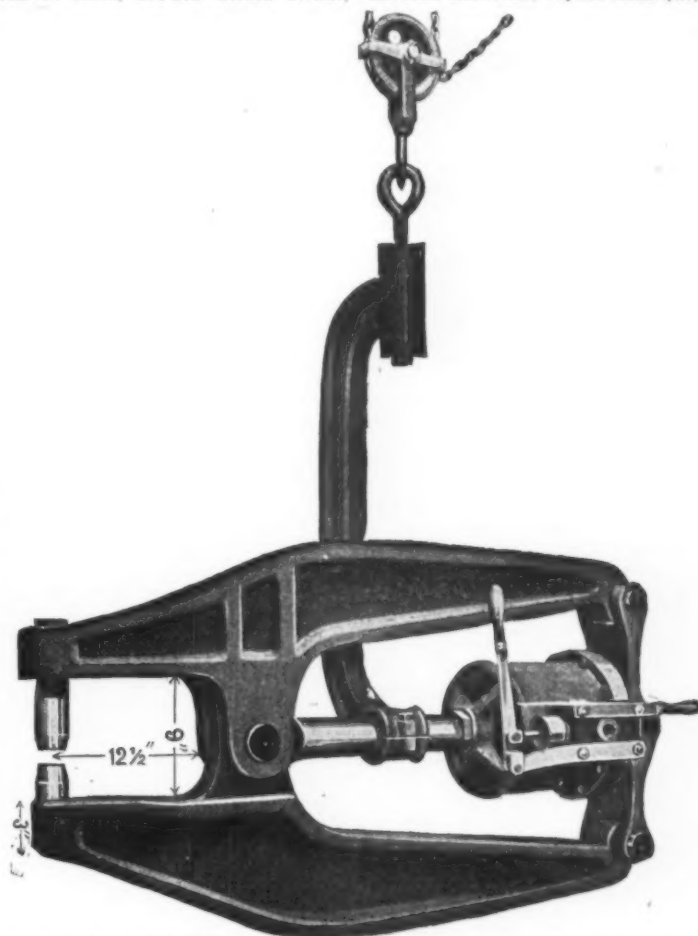
New Design Allen Riveter.

Constantly studying improvements in the line of riveting machines, the firm of John F. Allen, 370-372 Gerard avenue,

plants, and the St. Louis Car Co. has just installed a number of them.

The Delaware, Lackawanna & Western Railroad Co. has a similar riveter of smaller dimensions for riveting together the flanges of four-inch channels.

The Petersburg, Newport News & Norfolk Steamboat Line of Petersburg, Va., has been chartered; capital stock \$10,000

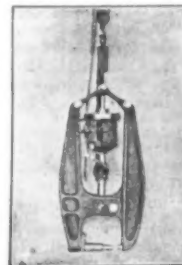


NEW DESIGN ALLEN ALLIGATOR RIVETER—HORIZONTALLY SUSPENDED.

New York city, has recently produced the machine illustrated herewith, the practical results already obtained from which cannot but lead to its adoption by up-to-date structural and car shops.

Suspended from a double axis, this riveter can be operated horizontally or vertically without any changes of mechanism

to \$100,000. The directors are LeRoy Roper, president; J. W. Seward, vice-president; James E. Cuthbert, treasurer; T. M. Davis, secretary; Carl W. Davis, all of Petersburg.



ALLEN RIVETER—VERTICALLY SUSPENDED.



ALLEN RIVETER—ANOTHER WAY OF SUSPENDING.

The Metropolitan Transportation Co. has been incorporated at Norfolk, Va., to operate a herd line there or in any other city or town; capital, \$5000 to \$10,000. The officers are L. Sims, president; Alex. Wright, vice-president; C. A. Jones, treasurer; J. Henry Cornwill, secretary.

whatever, thus at once reaching rivets which otherwise would require untold adjusting of the ordinary riveter. Its scissor-type jaws can be inserted in confined spaces which could not be riveted except by hand.

The American Car & Foundry Co. has in use 12 of these machines at its various

Construction Department

TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY.

The MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ADDRESS FULLY.

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

WRITE DIRECTLY.

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

ALABAMA.

Anniston, Ala.—Water-power-Electric Plant. Asbury Electric Co. has been incorporated with \$10,000 capital stock for the development of the water-power of the Coosa river at Lock 2, near Ten Island shoals, and the establishment of electric plant for transmission of electricity to Anniston. Bridgman Curtis is president; W. F. Johnston, vice-president, and Millard C. Heemston, secretary-treasurer.

Birmingham, Ala.—Hardware.—Long-Lewis Hardware Co. has been incorporated with an authorized capital stock of \$200,000 by W. J. Long, J. A. Lewis, John C. Berry and others.

Birmingham, Ala.—Coal Mines.—Cedron Coal Co. has been incorporated with \$5000 capital stock. W. C. Shackelford is president; J. B. Ritters, vice-president, and J. B. Bicknell, secretary.

Cullman, Ala.—Land Improvement.—Chartered: Bushy Creek Land Co., with \$5000 capital stock, by James S. Dunbar, L. A. Carter, Thomas W. Cardwell and others.

Dothan, Ala.—Hardware Company.—Stephens Hardware Co. has been incorporated with \$7000 capital stock by J. R. Faircloth and others.

Gadsden, Ala.—Electric-power Plant.—Alabama City, Gadsden & Attalla Railway Co. has let contract for machinery to be installed in power station at a cost of \$75,000 as follows: For electrical machinery and steam turbines to the Westinghouse Electric & Manufacturing Co. of Pittsburgh, Pa.; for pumps and condensers to Henry R. Worthington of New York, N. Y. Contracts for the erection of buildings on 5th street will shortly be let. (Reference has been made to this company's improvements at various times in this department.)

Guntersville, Ala.—Water-works.—Town will vote July 18 on a \$12,000 bond issue for the installation of water-works. If bond issue carries, the Campbell Manufacturing Co. of Gadsden, Ala., will probably be awarded contract for the construction. Address Town Clerk.

Hillsboro, Ala.—Cotton Gln, etc.—Planters' Gln & Warehouse Co. has been incorporated with \$8000 capital stock by A. W. Bailey and others.

Jackson, Ala.—Gravel Mines.—Southern Gravel Co. has been incorporated with \$5000 capital stock. A. J. Boyles is president; C. W. Boyles, vice-president; Aubrey Boyles, secretary and treasurer, and E. A. Wierengo, general manager; main office, Mobile, Ala.

Jasper, Ala.—Steam Laundry.—J. D. McDonald is reported as considering the establishment of steam laundry.

Mobile, Ala.—Coal-land Developments.—J. F. Hanson, president of the Central of Georgia Railway Co., Macon, Ga.; George B. McCormack, Erskine Ramsey, T. G. Bush and others of Birmingham, Ala., have purchased from the Gulf Coal & Coke Co. 17,000 acres of coal lands in Walker and Jefferson counties, Alabama. The purchase price is reported at more than \$1,500,000. While the intention is to develop the property, the new owners will not be prepared to make any definite statements as to their plans for several months.

Mobile, Ala.—Street-paving.—Board of Public Works, Stewart Brooks, president, is arranging for about 50,000 yards of street-paving. It is estimated that the work will aggregate about \$195,000, and it is recommended that bonds to this amount be issued.

Montgomery, Ala.—Cotton Mill.—It is reported that Bert Well will organize company to build a cotton mill.

Montgomery, Ala.—Cotton-stalk Products. The Cotton Stalks Products Co., reported June 28 and July 5 under Atlanta, Ga., as organized with \$15,000,000 capital stock for the manufacture of paper and other products from cotton-stalk fiber, has decided to locate a \$100,000 plant at Montgomery. Other plants will be established at Atlanta, Ga.; Birmingham, Ala., and New Orleans, La. Harvie Jordan, Atlanta, Ga., is president.

Montgomery, Ala.—Plaster Factory.—A. P. Stout contemplates engaging in the manufacture of fiber or pulp plaster.*

Montgomery, Ala.—Street-paving.—Memphis (Tenn.) Asphalt Paving Co. has contract for paving Sayre street with asphalt, and the Chattanooga Roofing & Paving Co., Chattanooga, Tenn., for paving Hull street with brick.

Montgomery, Ala.—Woodworking Plant.—Willingham Door Co. has been incorporated with \$30,000 capital stock and privilege of increasing to \$100,000. T. M. Willingham is president; W. B. Willingham, secretary-treasurer.

Montgomery, Ala.—Round-bale Presses and Gins.—Alabama Round Bale Co. has been incorporated with an authorized capital stock of \$25,000 to operate roundlap cotton presses and ginning plants. F. C. Hamill is president, and H. E. Quillan, secretary-treasurer.

Selma, Ala.—Cotton Company.—Incorporated: Thompson Cotton Co., with \$10,000 capital stock, by W. N. Thompson, Richard H. Mabry, William S. Mabry and associates, to conduct a general cotton business.

ARKANSAS.

Denning, Ark.—Coal Mines.—Franklin Coal Co., reported incorporated last week with \$10,000 capital stock, will develop 360 acres of coal lands; daily capacity, 500 tons. Equipment has been purchased and contract awarded for all construction work. Fred Randle is president; Will Cheek, vice-president, and J. D. Crockett, secretary-treasurer.

Fayetteville, Ark.—Sewerage System.—Burns & McDonnell, Kansas City, Mo., have been engaged to prepare plans and make estimates of cost of constructing sewerage system.

Fordyce, Ark.—Mill Company.—W. A. Elliott, R. W. Mays, H. C. Ogletree and others have incorporated the H. C. Ogletree Mill Co. with \$20,000 capital stock.

Heber, Ark.—Flour Mill.—James A. Casey, Hugh L. King, Benjamin J. Allen and associates have incorporated the Heber Mill Co. with \$10,000 capital stock.

Hot Springs, Ark.—Drug Company.—Incorporated: Hot Springs Remedy Co., with \$10,000 capital stock, by Ray Gill, H. O. Price and J. T. Jackson.

Hot Springs, Ark.—Construction Company. T. M. Dodson Construction Co. has been incorporated with \$25,000 capital stock by T. M. Dodson, C. W. Dodson and C. C. Henderson.

Little Rock, Ark.—Land Improvement.—Mutual Real Estate Co. has been incorporated with \$100,000 capital stock by Gabe

Block, Joseph Lyons, Herman Kahn and others.

Midland, Ark.—Cotton Gln, etc.—Chartered: Midland Gln & Lumber Co., with \$10,000 capital stock, by W. T. Quinley, J. C. Peal, H. Denman, A. S. Johnson and associates.

Newport, Ark.—Cotton Gln.—Incorporated: American Ginning Co., with \$40,000 capital stock, by Sigmund Wolff, Isaac Goldman, M. S. Lettleton and others.

Paris, Ark.—Coal Mines.—Joseph Pendleton, Martin Theurer and Anthony Hall have incorporated the Paris Coal Co. with \$50,000 capital stock.

Walnut Ridge, Ark.—Sawmill.—National Lumber & Manufacturing Co., recently organized with \$100,000 capital stock, has purchased six lots adjoining the sawmill of J. J. Moore, which is also included, and 80 acres of timber land for development purposes.

DISTRICT OF COLUMBIA.

Washington, D. C.—Garage.—Ellen J. Kirby has commissioned James H. Warner, architect, 602 13th street N. W., to prepare plans and specifications for garage to be erected at 3029 M street N. W.; three stories, 83x128 feet; brick with sandstone trimmings; reinforced-concrete construction; slag roof; electric wiring and fixtures; sanitary plumbing; elevator; cost about \$42,000.

Washington, D. C.—Refrigerating Plant.—Kings & Co., pork products and provisions, 908 C street N. W., will erect refrigerating plant at 638 Pennsylvania avenue; three stories; brick with stone trimmings; structural iron and steel; tin and slag roofing; galvanized-iron cornice and skylight; sanitary plumbing. Electric wiring and fixtures and insulation of refrigerating rooms not included in contract. Alternate bid on reinforced-concrete construction. Complete refrigerating plant will be installed. John H. Nolan, 1413 G street N. W.; Wm. P. Lipscomb & Co., 1405 F street N. W.; Samuel J. Prescott Company, 700 13th street N. W.; Louis H. Emmart, 1419 G street N. W.; W. E. Speil Company, 1342 New York avenue N. W., and Arthur Cowall, Colorado Building, 14th and G streets N. W., are estimating on construction; Appleton P. Clark, Jr., architect, 605 F street N. W.

Washington, D. C.—Electric-power Houses. The Potomac Electric Power Co., 213 14th street N. W., has awarded contract to Richardson & Burgess, Colorado Building, 14th and G streets N. W., to construct No. 2 substation on Washington street N. W. at cost of about \$15,000, and to Fissell & Wagner, Home Life Building, 15th and G streets N. W., to construct No. 10 substation, between H, I, 14th and 15th streets N. W., at cost of about \$28,000.

FLORIDA.

Argyle, Fla.—Brick Plant.—G. H. Murphy contemplates establishing brick plant.*

Carrabelle, Fla.—Freight Terminals, etc.—The Georgia, Florida & Alabama Railway, J. P. Williams, Savannah, Ga., president, is reported as planning extensive improvements, including the improvement of the harbor, extending freight terminals, etc., and application has been made to Congress for an appropriation of \$200,000 for dredging harbor to give a depth of 22½ feet at the wharves at low water.

Fort McCoy, Fla.—Sawmill.—Rents Lumber Co. of Silver Spring, Fla., is arranging for the erection of sawmill.

Hastings, Fla.—Drainage Ditch.—Arrangements are being made for the construction of a drainage ditch, and Robert Ransom has submitted a report showing a direct route to the St. Johns river, a little over a mile in length, by which two-thirds of the surplus rainfall can be disposed of. The ditch will be 15 feet wide at the bottom, with a gradual fall to the river of a little over six feet to the mile, capable of carrying from 5,000,000 to 8,000,000 gallons of water per hour in a depth of from three to four feet. As soon as the right of way through private lands is secured for the main canal bids for the work will be asked.

Jacksonville, Fla.—Cider and Vinegar Factory.—Jacksonville Manufacturing Co. has been incorporated with \$15,000 capital stock to manufacture cider, vinegar, etc. J. M. Lamb is president; W. W. Bougher, vice-president, and A. J. Bright, secretary-treasurer.

Jacksonville, Fla.—Railroad Subway.—It is reported that the Jacksonville Terminal Co.

is arranging for the construction of a subway on Myrtle avenue.

Orlando, Fla.—Concrete-block Factory.—Orlando Building Block Co. has been incorporated with \$5000 authorized capital stock. H. A. Shreve is president, and T. Picton Warlow, secretary-treasurer.

Pensacola, Fla.—Timber Development.—It is reported that J. R. Ramsey, president First National Bank, Seabee, Ky., has purchased 14,000 acres of cut-over timber lands near East bay, about 40 miles from Pensacola. The property, it is stated, will be developed and disposed of for farming.

Pensacola, Fla.—Land Improvement.—Reports state that Gulfport (Miss.) parties have purchased from the Pensacola Investment Co. 215 acres of land adjacent to Pensacola which will be developed as suburban residence site.

GEORGIA.

Atlanta, Ga.—Cotton Gln, Cottonseed-oil Mill, etc.—Central Ginning & Baling Co. has been incorporated with \$150,000 capital stock by Paul Jones, 355 West 145th street, New York city; F. K. Lister, 733 St. John's Place, Brooklyn, N. Y., and Emory H. Sykes, Rosebank, S. I., to gin and clean cotton, manufacture cottonseed oil, etc.

Atlanta, Ga.—Manufacturing.—J. W. Conway and associates have purchased the site and buildings of the De Loach Mill Manufacturing Co. for the location of manufacturing plant. It is estimated that about \$100,000 will be invested.

Atlanta, Ga.—Viaduct.—W. W. Griffin will supervise the construction of Nelson-street viaduct, for which plans were prepared by the Trussed Concrete Steel Co.; to be constructed of steel and concrete; abutments to be of reinforced concrete, the slabs and sidewalks of tile, and the roadway laid with creosoted blacks. The longest span will be 75 feet. About \$40,000 will be expended.

Atlanta, Ga.—Steel Bridges.—Bids will shortly be asked by the Fulton county commissioners for the construction of two steel bridges across the Chattahoochee river, mentioned last week; H. M. Wood, clerk of board.

Atlanta, Ga.—Furniture Company.—Stillman Furniture Co. has been incorporated with \$5000 capital stock, and privilege of increasing to \$50,000, by King Stillman, Leo Stillman and Wiley Jones.

Auraria, Ga.—Gold-mining.—It is reported that George F. Curry, J. W. McIntosh and associates of Kansas City, Mo., have purchased a gold-mining tract of 300 acres and will arrange for operating on an extensive scale.

Cartersville, Ga.—Electric-light Plant.—Arrangements have been completed for the construction of electric-light plant referred to June 28, and bids for the work will be received until July 23; Paul Gilreath, mayor; J. B. McCrary, engineer, Empire Building, Atlanta, Ga.*

Columbus, Ga.—Cotton Mill.—The Eagle & Phenix Mills will award contract for additional machinery, including 16,000 spindles, etc., to cost \$60,000. Many old spindles will be displaced and present capacity will be increased.

Fitzgerald, Ga.—Cannery.—L. Robitzsch and associates contemplate installing a fruit and vegetable cannery.*

Gainesville, Ga.—Hardware Company.—Palmer Hardware Co. has been incorporated with \$65,000 capital stock and privilege of increasing to \$100,000 by Mark Palmer, S. C. Dinkins and associates.

Jackson, Ga.—Water-works and Electric-light Plant.—Bids will be opened July 28 for the material necessary for the construction of water and light plant; J. B. McCrary, engineer, Empire Building, Atlanta, Ga. Address The Mayor.*

Jefferson, Ga.—Cotton Mill.—Jefferson Cotton Mill contemplates adding a 60 per cent. addition to present plant, which operates 5000 spindles and 175 looms.

Macon, Ga.—Street Improvements.—City will vote July 24 on the issuance of \$100,000 of bonds for paving and grading streets, referred to May 24. Bridges Smith is mayor.

Macon, Ga.—Viaduct.—The viaduct mentioned July 5 to be constructed across Bay street will be built by the Central of Georgia Railway, H. M. Steele, Savannah, Ga., chief engineer, and the Georgia Southern & Florida Railway, J. J. Gaillard, Macon, Ga., chief engineer.

Macon, Ga.—Road Improvements.—Arrangements are being made for macadamizing various roads in Bibb county. No contracts will be let; E. A. Wimblish, engineer in charge.*

Monroe, Ga.—Wagon Factory.—The establishment of wagon factory is being considered, and Nunnally & Langston are said to be interested.

Savannah, Ga.—Hardware Company.—Martin Hardware Co. has been incorporated with \$20,000 capital stock by William Lattimore, William R. Leaken of Savannah, W. H. Martin and A. W. Martin of Baltimore, Md.

Thomasville, Ga.—Street-paving.—City has voted affirmatively the \$30,000 bond issue reported May 31 for paving six blocks in the business section. Address The Mayor.

Toccoa, Ga.—Cotton Compress.—It is reported that the Southern Railway will rebuild cotton compress previously burned, expending about \$76,000 and installing a large hydraulic press. The Atlantic Compress Co., main office, Candler Building, Atlanta, Ga., it is stated, will operate the plant.

Toccoa, Ga.—Chemical Works.—Chartered: Piedmont Chemical Co., with \$1500 capital stock, by F. C. Davis, John McDorman, W. A. Bailey and others.

Valdosta, Ga.—Paint Factory.—South Georgia Paint Manufacturing Co., organized with B. B. Jernigan, president; C. H. Hughes, vice-president, and W. S. Coley, secretary-treasurer, has begun operating plant for the manufacture of roof paints.

Wadley, Ga.—Sawmill.—Perkins Manufacturing Co. of Augusta, Ga., has begun the erection of proposed sawmill. It is also stated that a sash, door and blind factory will be added later.

Waycross, Ga.—Water-works and Street Improvements.—City has voted affirmatively the \$35,000 bond issue for extending water-works and \$40,000 for street improvements, mentioned June 21. Address The Mayor.

KENTUCKY.

Knott County, Ky.—Coal and Timber Development.—C. B. Slem of Big Stone Gap, Va., and associates will develop 10,000 acres of coal and timber land in Knott and Perry counties, reported last week as having been purchased. Plans for the development have not been completed.

Louisville, Ky.—Manufacturing.—Crescent Manufacturing Co. has been incorporated with \$100,000 capital stock by E. L. McClain, A. E. Shaner and others.

Louisville, Ky.—Construction Company.—Kentucky Construction Co. has been incorporated with \$10,000 capital stock by Henry Bickel, H. H. Snyder and Jacob Bickel.

Morganfield, Ky.—Laundry and Bottling Works.—Incorporated: Morganfield Laundry and Bottling Works, with \$7000 capital stock.

Newport, Ky.—Coal Mines.—Newport Coal Co. has been incorporated with \$10,000 capital stock.

Stanton, Ky.—Cement Plant.—Patrick Cement Co. has been incorporated with \$25,000 capital stock and privilege of increasing to \$500,000 by J. C. Patrick, J. D. Atkinson and Mrs. Kate S. Bohannon for the establishment of Portland-cement plant. The company owns 1000 acres of clay and limestone lands in Powell county. The plant will have a capacity of 500 barrels of cement and cost \$350,000. C. G. Holmes of Columbus, Ohio, is engineer in charge.

LOUISIANA.

Amite City, La.—Water-works and Electric-light Plant.—Town will vote August 6 on the issuance of \$20,000 of bonds for water-works and \$5000 for electric lights. Address Town Clerk.

Bastrop, La.—Saw-mill.—J. S. Bacon of the Bacon Lumber Co., Cincinnati, Ohio, and associates, it is reported, have purchased 15,000 acres of timber land in Louisiana and will establish band-saw mill for its development.

Baton Rouge, La.—Brick Works.—The report last week of the burning of the plant of the Baton Rouge Brick Co. was erroneous; only two kiln sheds and three drying sheds being destroyed, which will be rebuilt. The loss amounted to \$6000, not \$20,000 as was reported.

Baton Rouge, La.—Publishing.—Daily State Publishing Co. has been incorporated with \$10,000 capital stock. H. F. Brunot is president; W. Carruth Jones, vice-president, and F. L. Rosenthal, secretary-treasurer.

Bunkie, La.—Water-works.—Reports state that the town will install water-works to cost \$18,000. Address Town Clerk.

Donaldsonville, La.—Street Paving.—Bids will be received until July 25 for paving Mississippi street and Railroad avenue, for which \$50,000 was mentioned June 21 as available; Chas. Maurin, mayor.*

New Orleans, La.—Drayage Company.—New Orleans Drayage Co. has been organized with \$3000 capital stock. Alexander S. Tutwiler is president and treasurer; E. M. Tutwiler, vice-president, and W. H. McGaw, secretary.

New Orleans, La.—Foundry and Machine Shop.—Nathan S. Stern has purchased the plant of the Boland-Gachwind Company, and will organize the Stern Foundry & Machinery Co. with \$50,000 capital stock for its operation. Extensive improvements will be made, including the installation of electric cranes and a new trip-hammer for the blacksmith shop. Mr. Stern will be president and general manager, and Tom Roberts, superintendent.

New Orleans, La.—Lumber Plant.—McCarthy Lumber Co., Ltd., has been incorporated with \$25,000 capital stock to manufacture and deal in lumber. William R. McCarthy is president; Joseph Birg, vice-president, and Andrew M. Cooke, secretary-treasurer.

New Orleans, La.—Land Improvement.—Bourbon Realty Co. has been incorporated with \$5000 capital stock. R. W. Riordan is president; W. L. Gleason, vice-president, and Robert Legler, secretary-treasurer.

New Orleans, La.—Machinery-manufacturing.—Boland Machine & Manufacturing Co. has been incorporated with \$25,000 capital stock. Joseph K. Boland is president and secretary-treasurer, and Dr. Richard W. Boland, vice-president.

New Orleans, La.—Mineral Water.—Mineral Water Service Co. has incorporated with \$30,000 capital stock to deal in mineral water. H. Byrnes is president; S. B. Allen, vice-president, and Augustus Richter, secretary.

New Orleans, La.—Coal and Coke Company.—Tutwiler Coal & Coke Co., Ltd., reported incorporated last week with \$20,000 capital stock, will engage for the present in the wholesale and retail coal business only; later the company may operate mines in Alabama. Alexander S. Tutwiler of New Orleans is president; Willis J. Milner of Birmingham, Ala., vice-president, and Archie Hall of New Orleans, secretary.

New Orleans, La.—Refrigerating Plant.—City is considering the installation of new refrigerating plant at the morgue to cost about \$1000. Address City Engineer.

New Orleans, La.—Manufacturers' Agents.—Newana Company, Ltd., has been incorporated with \$25,000 capital stock; importers and manufacturers' agents. Theodore S. Howard is president; Allain Freret, vice-president, and Numa Livaudais, secretary-treasurer.

New Orleans, La.—Natural-gas Main.—It is reported that Samuel Hunter of Shreveport, La., is negotiating with Northern capitalists relative to the supplying of New Orleans with natural gas for illuminating and fuel purposes. Gas in quantities sufficient to supply the entire city, it is stated, is found within a radius of four miles, and it is proposed to construct a pipe line.

New Orleans, La.—Machinery and Metals.—New Orleans Scrap Metal Co. has been incorporated with \$50,000 capital stock to deal in metals and machinery of every description. Garnet W. Coen is president; Mark A. Morse, Jr., vice-president, and Walter Goldman, secretary-treasurer.

New Orleans, La.—Machine Shop, Foundry and Iron Works.—Broslus-Monts Manufacturing Co., reported incorporated May 17, will manufacture a no-treadle sewing machine and spring motor, operate foundry and malleable-iron works. A three-story brick building, 50x150 feet, will be erected at a cost of \$30,000. About \$200,000 will be expended in equipment. Charles S. Monts is president and general manager, and Theo. Lehmann, secretary and treasurer; office, 336 Baronne street.*

New Orleans, La.—Baking-powder Factory.—Gulf Manufacturing Co. has been incorporated with \$30,000 capital stock. Mrs. F. W. Young is president; H. D. Richardson, vice-president, and Peter Gillen, secretary-treasurer.

New Orleans, La.—Chartered: Hillery-Kelly Company, with \$25,000 capital stock. J. A. Hillery is president and secretary, and Peter Kelly, vice-president and treasurer.

New Orleans, La.—Manufacturing.—It is reported that Charles Durr has purchased site and will erect building which will be equipped for manufacturing purposes.

New Orleans, La.—Brewery.—Dixie Brewing Co. is having plans prepared by Louis Leble, Chicago, Ill., for new buildings to be erected; main building seven stories, 175x300 feet. About \$250,000 will be invested and the plant will have a capacity of 40,000 barrels. (This company was mentioned April 19 as consolidating with the Union Brewing Co., increasing capital stock from \$160,000 to \$250,000, and to erect new buildings.)

Opelousas, La.—Sewerage and Street Paving.—City will vote August 4 on the issuance of \$60,000 of bonds for sewerage and street paving. Address The Mayor.

Ponchatoula, La.—Incorporated: Edwards Bros. Co., Ltd., with \$25,000 capital stock. A. M. Edwards is president; J. A. Edwards, vice-president and general manager, and D. F. Young, secretary-treasurer.

Tangipahoa, La.—Lumber Plant.—Cooke-Day Lumber Co. has amended charter changing name to the Day Lumber Co. and increasing capital stock to \$100,000.

West Monroe, La.—Concrete-block Factory.—J. E. Morgan, C. C. Morgan and W. J. Webb have incorporated the Ouachita Concrete Co. for the manufacture of hollow concrete blocks, brick, sewer pipe and paving blocks.

Zimmerman, La.—Sawmill.—Jos. A. Bentley, it is reported, will rebuild sawmill recently burned.

MARYLAND.

Annapolis, Md.—Public Improvements.—City will vote July 17 on the \$25,000 bond issue reported April 19 for improving streets and constructing additional sewers. Address The Mayor.

Baltimore, Md.—Candy Factory.—The Blue Ribbon Candy Co., 749-755 West Pratt street, has increased its capital stock from \$50,000 to \$150,000 and has leased two additional buildings and will install additional machinery, including dynamo and ice machinery, in order to increase its output; G. Henry Uhlenberg, president, and Charles H. C. Foard, secretary and treasurer.

Baltimore, Md.—Cleaning and Dyeing Plant.—Emil Fisher, cleaner and dyer, 216 West Fayette street, has purchased four-story building at 228 North Howard street and will remodel it for his plant.

Baltimore, Md.—Garage.—The Realty Corporation, Frank I. Widner, president, 8 East Lexington street, representing Frank Corbus of Chicago, Ill., has purchased three-story building 100x120 feet at northwest corner of North avenue and Oak street and will expend about \$50,000 in converting the building into a garage.

Baltimore, Md.—Land Development.—The Citrus Fruit & Land Co. has been incorporated with capital of \$50,000 to deal in land and cultivate fruits, vegetables, etc., by Wm. W. Dix, 1116 North Eutaw street; Geo. A. Finch, James A. Fechtig, Calvert Building, St. Paul and Fayette streets.

Baltimore, Md.—Lumber.—The R. E. Wood Lumber Co., Continental Building, Baltimore and Calvert streets, has increased its capital stock from \$500,000 to \$1,500,000.

Baltimore, Md.—Storage Warehouse.—The Central Warehouse Co. has been incorporated with capital of \$60,000 to conduct storage warehouse by Solomon F. Miller, Abraham L. Rosenaur, Benjamin F. Hearn, Lee S. Meyer and Frank J. Caughy. The company has purchased six-story warehouse at 517-523 West Baltimore street, which will be equipped for storage purposes.

Baltimore, Md.—Sawmill.—The Baltimore & Ohio Railroad Co. has awarded contract to Edward Brady & Son, 1113 Cathedral street, for the construction of sawmill at its Mt. Clare shops; two stories, 70x247 feet; brick with stone trimmings; reinforced-concrete floors; steel girders and roof trusses; composition roofing; galvanized-iron skylights; steel rolling doors; electric wiring and fixtures; sanitary plumbing; steam-heating system; elevator; cost about \$70,000. Plans were prepared by the engineering department, Mt. Royal Station; D. D. Carothers, chief engineer.

Cumberland, Md.—Land Improvement.—Jos. Forsyth Harrison is supervising the laying off of streets and improving as residence suburb the property recently acquired by the Real Estate & Securities Co. of Allegany county, Maryland, 7 South Liberty street. It is proposed to install water-works and sewerage, and information regarding same may be desired later by the company.*

Highlandtown, Md.—Water-works Improvement.—Baltimore County Water & Electric Co. has completed plans for extension of mains in Baltimore county, and construction work will begin at once. It proposes to lay a main under the Patapsco river from the Rockburn branch to Avalon to the filtration plant, which will be enlarged, piping the water through the suburbs to Hamilton, taking in Catonsville, Franklin, West Arlington, Mt. Washington, Govans and Towson; erect a large reservoir on property recently acquired at Algburth. A mortgage has been recorded covering an issue of \$1,500,000 40-year 5 per cent. gold bonds, \$725,000 of which will be issued at once and the balance held for future extensions and improvements. The company has a capital stock of \$300,000, of which \$275,000 has been issued; Baltimore office, 411 East Baltimore street.

Sparrow's Point, Md.—Iron Furnace.—Maryland Steel Co. has blown out furnace "A" for relining.

MISSISSIPPI.

Brookhaven, Miss.—Water-works and Electric-light Plant.—Plans and specifications have been completed for improvements mentioned June 7 to be made to the water-works and electric-light plant, and bids for the new machinery to be installed will be opened July 30. Bids are asked on both steam and gas engines. Address Superintendent Purser.

Brookhaven, Miss.—Brick Works.—Brookhaven Press Brick & Manufacturing Co., reported incorporated June 28 with \$50,000 capital stock, has completed organization with Felix A. May, president; A. C. McNair, vice-president; H. Cassidy, secretary; M. D. McGrath, treasurer, and J. J. Phillips, general manager. Work of construction has begun and equipment has been purchased. L. E. Schilling of Magnolia, Miss., promoted this company and was previously mentioned in connection with it.

Canton, Miss.—Cotton Gin.—Canton Oil Mill Co. will erect a six-stand cotton gin, replacing plant recently reported burned; brick construction. About \$7000 will be invested.

Columbus, Miss.—Fertilizer Factory.—Refuge Oil Co. has let contract for the erection of building and the necessary equipment to be installed for a plant of 250 tons daily capacity.

Columbus, Miss.—Hardware Company.—Columbus Hardware Co. has been organized with \$75,000 capital stock by A. H. Pegues, Geo. F. McCowan and associates.

Deeson, Miss.—Cottonseed-oil Mill.—Chartered: Deeson Oil Mills, with \$25,000 capital stock, by J. C. Brooks, W. W. Dickerson and others.

Greenwood, Miss.—Cotton Gin.—Planters' Gin Co. has been incorporated with \$400,000 capital stock by J. M. Estes, Mrs. C. W. Butt, W. L. Stephenson and others.

Gulfport, Miss.—Land Improvement.—Mississippi Interstate Colonizing Co. has been organized with \$75,000 capital stock by John H. Little, J. R. Milner, S. D. Stuart and Charles E. Denton, to purchase, improve and colonize lands in Mississippi.

Lamar County, Miss.—Timber Land.—Hawkins & Co. of Hattiesburg, Miss., it is reported, have purchased 3400 acres of timber land in Lamar county at \$127,000.

McComb City, Miss.—Electric-light Plant and Water-works.—City will vote August 4 on a \$30,000 bond issue for the installation of electric-light plant and \$15,000 of bonds for extending water mains. Address The Mayor.

Meridian, Miss.—Cotton Compress.—The Gulf Compress Co., it is reported, has purchased the Star compress and warehouse and is conducting negotiations for the purchase of the Bierce compress. The company has been operating both these plants under lease, and the purchase is made preliminary to making extensive improvements. It is estimated that about \$250,000 is involved in the transaction.

Moorhead, Miss.—Manufacturing.—Delta Manufacturing Co. has been incorporated with \$20,000 capital stock by John A. Levings, F. R. Alexander and others.

Natchez, Miss.—Public Improvements.—City is considering issuing \$100,000 of bonds for the construction of electric-light plant and the erection of school building. Address The Mayor.

Vicksburg, Miss.—Water-works.—It is proposed to organize a company for the establishment of water-works, and a committee has been appointed to engage an engineer to prepare a survey and estimate of the cost. Address J. P. Adams, secretary Business League.*

Waynesboro, Miss.—Cotton Gin and Grist Mill.—Waynesboro Gin & Mill Co. has been incorporated with \$10,000 capital stock by E. F. Ballard, R. W. Fagan, J. R. Higgins and others.

MISSOURI.

Cardwell, Mo.—Cotton Gin.—Chartered: Farmers' Co-operative Gin Co., with \$5000 capital stock, by P. A. Vaughn, T. J. Griffith and others.

Carthage, Mo.—Mining.—Redant Mining Co. has been incorporated with \$50,000 capital stock by G. R. Smith, J. C. Hall and others.

Carthage, Mo.—Powder Works.—Independent Powder Co. is reported to double the present capacity of plant of 108,000 pounds weekly.

Clayton, Mo.—Publishing.—Citizens' Publishing Co. has been incorporated with \$6000 capital stock by James H. Pedmore, C. T. Dana, W. M. Pinnson and others to publish a weekly newspaper.

Crystal City, Mo.—Glass Works.—Pittsburg Plate Glass Co. (main office, Pittsburg, Pa.)

is reported as to erect a \$3,000,000 glass plant to be equipped for an annual capacity of 7,000,000 feet of plate glass. It is stated that operations will be resumed at plant, which has not been in use for several years pending the erection of new factory. F. A. Drew is local manager.

Higginsville, Mo.—Mineral Company.—Chartered; Belt-Ford Mineral Co., with \$50,000 capital stock, by C. Y. Ford, N. M. Cooper and others.

Independence, Mo.—Sewerage System and Electric-light Plant.—City has voted the proposed \$30,000 bond issue for extending sewer system and improving electric-light plant. Address The Mayor.

Joplin, Mo.—Zinc Mines.—Chartered; Chitwood-Joplin Zinc Co., with \$100,000 capital stock, by Charles O. Austin, Frank B. Wilcox and others.

Leyas, Mo.—Road-building.—Davidson Bros., Kansas City, Mo., have contract for grading and masonry on six miles of the Leyas and Oak Grove roads. Their bid was: Earth excavation, 17 cents a cubic yard; rock excavation, 70 cents a cubic yard; bridge masonry, \$5.50 a cubic yard; culvert masonry, \$3.75 a cubic yard.

Mt. Vernon, Mo.—Milling Company.—Holland-O'Neal Milling Co. has been incorporated with \$21,000 capital stock by John T. Holland, George W. O'Neal and Frank T. O'Neal.

Senath, Mo.—Cotton Gin.—Farmers' Union Cotton Gin Co. has been incorporated with \$7000 capital stock by D. W. Rowland, C. B. Mahan and others.

Shelbina, Mo.—Lumber Company.—Chartered; Cotton Lumber Co., with \$30,000 capital stock, by Weldon Cotton, B. T. Willis and others.

St. Joseph, Mo.—Engineering Company.—Chartered; St. Joseph Engineering Co., with \$5000 capital stock, by E. P. Snowden, Herman G. Miller and others.

St. Louis, Mo.—Sausage Factory.—German Sausage & Provision Co. has been incorporated with \$25,000 capital stock by Frederick Schroeder, Frederick H. Clasen and others to manufacture sausage.

St. Louis, Mo.—Chemical Works.—C. E. Elmer Gray, Katherine R. Gray and others have incorporated the Gray Chemical Co. with \$5000 capital stock.

St. Louis, Mo.—Manufacturing.—Fred G. Frey Manufacturing Co. has been incorporated with \$8000 capital stock by Fred G. Frey, Nathan Plan and others.

St. Louis, Mo.—Public Improvements.—Robert Moore, chief engineer, and Albert T. Perkins, railroad expert, have made the following recommendation to the municipal assembly: Construction of new four-track cantilever bridge across the Mississippi river at Poplar street, exclusively for railroad service; city to acquire the Eads bridge and use this structure as a central public highway, connecting with passenger and freight subways for electric lines or cars and wagons; construction of large freight depots and warehouses, similar to the Cupples station, at different strategic points; increase in team-yard capacity and in classification, track and storage yards, as well as other terminal facilities; that the levee and wharf east of 3d street be devoted to railroad use and the wharf extended farther into the river by filling, this expansion to be as great as federal laws and regulations will permit. The Poplar street four-track cantilever bridge would cost, everything included, about \$8,000,000. Estimated cost is: West approach, \$740,000; main river span between anchor piers, \$4,520,000; east approach, \$510,000; north branch, \$521,000; ties and rails in places, \$210,000; signal system, \$57,000; right of way, general expenses and contingencies, \$1,020,000. The proposed suspension bridge will be 1600 feet long; clear height of main span above curb level of wharf, 60 feet; will rest on piers of bedrock which will reach a depth of 36 feet on the west side and 98 feet on the east side; the Terminal Association to erect in connection with these improvements an inbound and outbound freight-house, six stories, having a frontage of 1200 feet extending along the harbor, with a width of 160 feet, and a warehouse storage extension from the Eads bridge to Franklin avenue, a distance of 500 feet; four tracks to be carried through the warehouse and storage building.

St. Joseph, Mo.—Printing Plant.—Nelson-Hanna Printing Co. has been incorporated with \$25,000 capital stock by Richard Nelson, Sr., W. S. Nelson and Elizabeth Nelson.

St. Louis, Mo.—Railway Devices.—St. Louis Frog & Switch Co., reported incorporated June 14, will manufacture frogs, switches, crossings and all types of track appliances for steam and street railways; main building to be 100x200 feet; steel frame and brick.

About \$150,000 will be expended in buildings and equipment; Lichter & Jens, Chemical Building, architects and engineers in charge.

St. Louis, Mo.—Lumber Mill.—Southeast Missouri Land, Lumber & Manufacturing Co. has been incorporated with \$24,000 capital stock by Frank Morton, A. N. Morton and others.

St. Louis, Mo.—Rolling Mill.—Acme Truck & Tool Co. has incorporated with \$600,000 capital stock to do a general rolling-mill business; incorporators, Thomas H. Forester, John M. Krieder and others.

St. Louis, Mo.—Jewelry Manufacturing.—Incorporated; Fred G. Frey Manufacturing Co., with \$8000 capital stock, by Fred G. Frey, Nathan Plan and others.

St. Louis, Mo.—Publishing.—Barnett Gram, Jacob Schurman and others have incorporated the Representative Publishing Co. with \$6000 capital stock.

John J. Lichter is president; B. S. Colnon, vice-president, and R. E. Einstein, general manager; office, 1319-1323 Chemical Building.*

Stotts City, Mo.—Land Improvement.—W. W. Robertson, Charles Stotts, Cornelia Currier and others have incorporated the Lawrence County Land Co. with \$50,000 capital stock.

Webb City, Mo.—Mining.—Flower City Mining Co. has been incorporated with \$500,000 capital stock by Stanley B. Snook, Sadie C. Hatten and others.

Webb City, Mo.—Zinc Mining and Milling. C. C. & H. Mining & Milling Co., reported incorporated last week with \$250,000 capital stock, will have a capacity for milling 600 tons of crude zinc ore daily. A frame building 66x100 feet, with 22-foot walls, will be erected. R. M. Clark is engineer in charge.*

NORTH CAROLINA.

Albemarle, N. C.—Furniture Factory.—Chartered; Parker-Little Furniture Co., with \$25,000 authorized capital stock, by W. F. Snuggs, G. M. Lipe and associates.

Charlotte, N. C.—Hardwood Plant.—Charlotte Hardwood Specialty Co. has been incorporated with an authorized capital stock of \$25,000 by J. C. Montgomery, W. J. Schiff and W. E. Bradley.

China Grove, N. C.—Cotton Mill.—It is reported that the Patterson Manufacturing Co. is preparing to begin the erection of an additional cotton mill, the present plant having 9296 spindles and 158 looms. This company's directors met in March and recommended an increase of capital stock for the purpose of building another mill.

Coolleemee, N. C.—Water-works.—The water system mentioned last week to be constructed, for which C. M. Miller, city engineer, Salisbury, N. C., was making surveys, is being installed by the Coolleemee Cotton Mills for furnishing water to employees, about 2500 in number; power to be obtained from plant already erected.

Durham, N. C.—Brick Works.—N. Underwood and C. A. Woods are reported as to establish brick plant in East Durham.

Lowell, N. C.—John C. Rankin, Frank Robinson and S. M. Robinson of Lowell, W. C. Wilkinson, J. A. Durham, John M. Scott and others of Charlotte, N. C., have incorporated the Peerless Manufacturing Co. with capital stock of \$200,000; \$100,000 is subscribed. This company has purchased site and will erect mill with capacity of 10,000 spindles, but will probably not install that number at first. Electricity will be the motive power. Yarns will be manufactured.

Marshall, N. C.—Cotton Mill.—Capitola Manufacturing Co., referred to last week, has awarded contract for installation of 5000 spindles, increasing the equipment to 10,000 spindles. No buildings will be erected.

Newton, N. C.—Water-works, Sewerage and Electric-light Plant.—City is arranging for the construction of water-works, sewerage and electric-light plant; John P. Yount, mayor.

Raleigh, N. C.—Land Improvement.—Glenwood Land Co. has increased capital stock from \$40,000 to \$100,000.

Roanoke Rapids, N. C.—Water-power-Electrical Plant.—Joseph H. Wallace, Temple Court Building, New York, is preparing plans and specifications and will be engineer in charge of the construction of hydro-electric-power plant to be built by the Roanoke Rapids Power Co. It is proposed to develop about 10,000 horse-power on the Roanoke river, constructing a concrete dam 2000 feet long to divert the water. Two 750-kilowatt generators will be installed. The powerhouse will be 39x49 feet, and its construction will include the installing of headgates, etc. The power obtained will be transmitted by electricity to furnish power to manufacturing enterprises and supplying the power necessary to operate the plant of the Ro-

anoke Rapids Paper Manufacturing Co., recently incorporated to establish a paper mill. (Reference to this development was made in September and May 31.)

Roanoke Rapids, N. C.—Paper Mill.—Roanoke Rapids Paper Manufacturing Co. (mentioned May 17 and 24 as organized for the establishment of paper mill to manufacture wrapping paper having a daily capacity of 20 tons) has about completed arrangements for erection of necessary buildings, which will include a main structure two stories high, 60x31 feet; machine-room, one story, 40x216 feet; finishing-room, one story, 81x96 feet; engine-room, 29x33 feet; boiler-house, 36x36 feet; cold-storage building and pump-house. Railroad trestle and some sidings, water-wheels, headgates, etc., will be included. About 300-horse-power boilers will be installed, and the equipment will include pulp beaters and necessary paper-making machinery. The power for operating will be obtained from the Roanoke Rapids Power Co., mentioned in this column as arranging for the development of the water-power of the Roanoke river. Joseph G. Wallace, Temple Court Building, New York, is preparing plans and specifications, and will superintend the construction of paper mill.

Salisbury, N. C.—Concrete-block Factory, etc.—Century Development Co. is being organized by C. M. Bell, Francis Murdoch, Jr., and others to manufacture concrete building blocks, erect buildings and deal in real estate.

Smithfield, N. C.—Starch Factory.—The establishment of plant for the manufacture of starch and by-products from the sweet potato is being considered. S. S. Holt can give information.*

Swain County, N. C.—Timber Land.—It is reported that H. Winchester of Buchanan, W. Va., and W. S. Harvey of Philadelphia, Pa., have purchased all the landed property of the Smoky Mountain Company and other tracts adjoining, 40,000 acres being the extent of purchase. The purchasers, it is stated, will transfer the land to the Southern Spruce Co., a holding company formed under the laws of New Jersey.

Thomasville, N. C.—Drug Company.—Dr. C. A. Julian, Dr. J. H. Mock and associates have incorporated the Thomasville Drug Co. with \$2000 authorized capital stock.

Walkertown, N. C.—Ice Plant.—T. A. Crews & Co. contemplate erecting a small ice plant.*

Winston, N. C.—Feed and Supply Company. T. W. McCrary, S. G. Anderson, J. J. Norman and others have incorporated the Standard Feed & Supply Co. with \$50,000 authorized capital stock.

SOUTH CAROLINA.

Belton, S. C.—Bridge Construction.—Blue Ridge Railway is reported as arranging for the construction of a steel bridge 151 feet long across Seneca river to cost about \$5000, and a steel bridge over Three and Twenty creek to have a span of 156 feet long and 95 feet high to cost \$4000. J. R. Anderson of Anderson, S. C., is superintendent.

Blacksburg, S. C.—Printing and Publishing. Blacksburg Printing & Publishing Co. has been incorporated with \$1000 capital stock by Charles Barber and others.

Bowling Green, S. C.—Knitting Mill.—Bowling Green Knitting Mill will install additional equipment; present equipment, 50 machines.

Cheraw, S. C.—Land Improvement.—Chartered; Pee Dee Land Corporation, with \$3000 capital stock. W. F. Stevenson is president; C. F. Moore, vice-president and general manager, and D. S. Matheson, treasurer.

Columbia, S. C.—Mineral Waters, etc.—Rock Cliff Lithia Springs Co., J. T. Harris, proprietor, will develop the Rock Cliff Springs property, recently purchased, bottling and shipping mineral water and carbonating water and ginger ale. A two-story cement-block building will be erected. About \$15,000 will be invested. Alonzo Brown is engineer in charge, and Avery Carter, Columbia, S. C., architect.*

Columbia, S. C.—Absorbent Cotton, etc.—Incorporated; Southern Aseptic Laboratories, with William J. Keenan, president and treasurer, and William M. Davis, vice-president and general manager. Absorbent cotton will be manufactured; daily capacity 10,000 pounds. A bleachery 40x150 feet will be erected at once. Wm. M. Davis, vice-president and general manager, will have charge of the construction of buildings. About \$50,000 will be invested.*

Dillon, S. C.—Cotton Compress.—C. T. O'Ferrall, Jr., and associates contemplate installing cotton compress to be operated in connection with ice plant.*

Gaffney, S. C.—Ice Factory.—Victor Cotton Oil Co. is reported as to establish ice fac-

tory. It is stated that contract for building and machinery has been let.

Iva, S. C.—Cotton Gin.—W. P. Clark is reported as installing cotton gin.

Laurens, S. C.—Water-power-Electrical Plant.—Reedy River Power Co., N. B. Dial, president, organized for the development of the water-power of the Reedy river at Boyd's Mill, 12 miles from Laurens, has been granted a franchise by the city for the transmission of power by electricity to Laurens for light and power purposes. The company has a capital stock of \$50,000.

Pickens, S. C.—Cotton Mill.—The Pickens Mill, W. M. Hagood, president, Easley, S. C., has awarded contract to John F. Grandy & Son of Greenville, S. C., for erection of buildings for proposed plant, previously reported; mill to have 15,000 spindles and 450 looms. All other details have been stated.

TENNESSEE.

Chattanooga, Tenn.—Land Improvement.—Chartered; Bluff View Land Co., with \$50,000 capital stock, by N. B. Haynes, H. D. Huffaker, Hooper Erwin, W. Patten Porter and associates. A tract of land has been purchased, which will be divided into building lots and residences will be erected.

Chattanooga, Tenn.—Clay Mines.—Thermoga Clay Products Co. has been incorporated by O. E. Deppen, C. A. Dauwalter, E. Gill, J. P. Chambers and G. J. Hamilton, to develop clay deposits.

Clarksville, Tenn.—Snuff Factory.—American Snuff Co. (main offices, New York city) is reported as arranging for the erection of another snuff factory.

Hillsboro, Tenn.—Cotton Gin, etc.—Planters' Gin & Warehouse Co. has been organized with \$8000 capital stock by A. W. Bailey and others.

Hohenwald, Tenn.—Planing Mill and Brick Works.—Hohenwald Planing Mill & Brick Manufacturing Co. has been incorporated with \$6000 capital stock by C. D. Loveless, Edward Johnson, A. M. Austin and others.

Johnson City, Tenn.—Knitting Mill.—Incorporated; Watauga Hosiery Mills Co., capitalized at \$10,000, by L. W. Wood, L. P. Wood, Frank Taylor, T. A. Cox and S. T. Millard.

McEwen, Tenn.—Electric-light Plant.—L. D. Baker is reported as arranging for the establishment of 1000-light electric plant.

Memphis, Tenn.—Candy Factory, Coffee Roasting, etc.—A. G. Wagner & Co. will erect four-story building 60x90 feet on site reported last week as having been purchased. Equipment will be installed for manufacturing candy, roasting coffee and manufacturing grocery sundries. About \$30,000 will be invested; Alsop & Woods, architects.

Memphis, Tenn.—Land Improvement.—Taylor Land Co., recently organized with \$50,000 capital stock, is arranging for the development of 24 acres of land on Poplar street as residence section, subdividing the tract into building lots. M. J. Roach is president; Thomas A. Taylor, vice-president and general manager.

Memphis, Tenn.—Valve Factory.—Rich & Lighthurn Manufacturing Co. has been chartered with \$30,000 capital stock by George W. Rich, J. S. Lighthurn, Gwynne Yerger and others, to manufacture valves.

Memphis, Tenn.—Cottonseed-oil Mill.—Phoenix Cotton Oil Co. states there is no truth in the report mentioned last week that it will erect cottonseed-oil mill.

Memphis, Tenn.—Telephone System.—Memphis Telephone Co. has increased capital stock from \$1,000,000 to \$3,000,000. It has filed a \$3,000,000 mortgage, the proceeds of the bond issue to be used in improving and extending the system, including the installation of new and additional machinery at the present exchange.

Mt. Pleasant, Tenn.—Phosphate Mines.—H. D. Ruhm, E. L. Gregory, J. A. Coble, John Garrett, E. Dan Smith, D. W. Shofner and J. S. Hill have purchased 366 acres of phosphate land in the Southport field and have organized the Brown Rock Phosphate Co. for its development. No buildings will be erected and no equipment needed.

Nashville, Tenn.—Sewerage System.—T. V. Barnesfield is lowest bidder at \$6496 for the construction of brick sewer in Waverly Place.

Nashville, Tenn.—Land Improvement.—Reports state that T. J. Hays, representing a Tennessee syndicate, has purchased the property of the West End Land Co. and will develop as residence site, grading and macadamizing streets and subdividing into building lots. About \$35,000, it is estimated, will be expended.

Nashville, Tenn.—Steam Laundry.—D. D. Canfield and H. W. Canfield will establish steam laundry, operating as the Model Laun-

dry. Building has been secured and machinery purchased.

Ravenscroft, Tenn.—Coal Mines.—It is reported that the Nashville, Chattanooga & St. Louis Railway, J. W. Thomas, general manager, Nashville, Tenn., is arranging for the development of its coal property near Ravenscroft.

Sweetwater, Tenn.—Water-works and Street Improvements.—City has voted affirmatively the proposed bond issue for water-works and street improvements. Address The Mayor.

Tiptonville, Tenn.—Cottonseed-oil Mill.—R. M. Hall and associates of Dyersburg, Tenn., are erecting a cottonseed-oil mill.

TEXAS.

Alvord, Texas.—Cotton Gln.—A. A. Williams, J. C. Russell and T. D. McLaughlin have incorporated the Farmers' Co-operative Gln Co. with \$10,000 capital stock.

Amarillo, Texas.—Feed Mill and Grain Elevator.—Star Mill & Elevator Co., reported incorporated last week with \$25,000 capital stock, will engage in a general grain business and the milling of all cereals; capacity, 10 cars daily. A fireproof building 28x120 feet will be erected; J. Travis, architect.

Beaumont, Texas.—Iron Works.—Neches Iron Works has increased capital stock from \$50,000 to \$100,000.

Brenham, Texas.—Telephone System.—O. R. Lehman, Otto Zander and others have incorporated the Muellersville-Brenham Telephone Co.

Chillicothe, Texas.—Cotton Gln.—Chartered: Farmers' Union Gln Co., with \$12,000 capital stock, by W. W. Cole, J. L. Potts, J. S. Haynes and others.

Corpus Christi, Texas.—Ice Plant.—Lone Star Ice Co. contemplates increasing the capacity of plant in the fall.

Cusseta, Texas.—Sawmill.—Hughes Springs Lumber Co., reported incorporated last week with \$5000 capital stock, will operate sawmill with a daily capacity of 25,000 feet. A building 60x100 feet will be erected.

Dallas, Texas.—Land Improvement.—Columbia Realty Co. has been incorporated with \$20,000 capital stock by A. R. Hann, A. J. Elliott, L. L. McNeese and others.

Dallas, Texas.—Land Improvement.—Trinity Land Investment Co. has been incorporated with \$50,000 capital stock by Robert S. Price, L. M. Dabney and others.

Dallas, Texas.—Coal Mines.—G. P. Scruggs, R. S. Price, L. M. Dabney and others have incorporated the Crystal Falls Coal Co. with \$50,000 capital stock.

El Paso, Texas.—Viaduct.—It is stated that arrangements are being completed for the construction of proposed viaduct for the Galveston, Harrisburg & San Antonio Railway, W. G. Van Vleck, manager, Houston, Texas, and the El Paso & Southwestern Railroad, H. J. Simmons, El Paso, Texas, general manager. The plans call for a structure to cost \$80,000.

Ennis, Texas.—Oil Wells.—Morrison-Witherspoon Oil Co. has been organized with \$15,000 capital stock. A. W. Morrison is president; H. T. Moore, vice-president; Jeremiah Clark, secretary, and J. Badreidge, treasurer.

Ferris, Texas.—Cotton Gln.—Ferris Farmers' Union Gln Co., reported incorporated last week with \$7500 capital stock, will operate cotton gln with a daily capacity of 40 bales; main building to be 20x62 feet and cotton-house 62x30 feet; Ben Nicholas, architect. Equipment of machinery has been purchased.

Fort Worth, Texas.—Lighting and Heating Plant.—Consumers' Light & Heating Co. has increased capital stock from \$100,000 to \$200,000.

Fort Worth, Texas.—Pumphouse.—Plans are being prepared by Sanguinet & Staats for pumphouse to be constructed at Arlington Heights by the Arlington Heights Traction Co. Two pumps will be installed, one to raise the water to the surface and the other to carry it up hill into tank.

Fort Worth, Texas.—Lumber Company.—Incorporated: Cypress Lumber Co., with \$10,000 capital stock, by A. C. Ford, W. B. Ward, Jr., and O. W. Glasco.

Fort Worth, Texas.—Overall Factory.—W. C. Bollinger is having plans prepared for the erection of a two-story factory building 50x140 feet. It is proposed to equip for the manufacture of overalls and cotton clothing.

Gainesville, Texas.—Grain Company.—Kell Grain Co. has been incorporated with \$20,000 capital stock by J. Z. Kell, H. H. Haines and others.

Galveston, Texas.—Evaporating Plant.—Reports state that A. F. Spaw of Rio Blanco, Mexico, is investigating with a view to locating plant for the manufacture of banana coffee and banana flour and evaporated cocoanut.

Hillsboro, Texas.—Telephone System.—Chartered: Hillsboro Telephone Co., with \$200,000 capital stock, by H. H. Davenport, R. A. Strong and others.

Mansfield, Texas.—Cotton Gln.—Chartered: Mansfield Gln Co. has been incorporated with \$9000 capital stock by J. H. Harrison, H. D. Stevens, W. S. Poe and others.

Marshall, Texas.—Street Improvements.—City will vote August 1 on the issuance of \$90,000 of bonds for sidewalk construction and \$40,000 for street-paving. Address City Engineer.

Mexia, Texas.—Railroad Repair Shops, etc. The buildings to be erected by the Trinity & Brazos Valley Railway Co., for which Jesse F. Denning & Co. were mentioned last week as having contract, will consist of shops 100x250 feet, of brick and steel construction; buildings to cost \$33,000 and equipment \$40,000; two-story brick depot to cost \$15,000 and contain general offices, etc. C. H. Page, Jr., Austin, Texas, prepared the plans.

Paris, Texas.—Foundry and Machine Shop. North Texas Foundry & Machine Co., reported incorporated June 28, will take over the business of Lee Totten. No buildings will be erected. The company will engage in general repair and house work. Lee Totten is president and manager; C. J. Turner, vice-president, and Joe N. Totten, secretary-treasurer.*

Sabine Pass, Texas.—Wharves, Docks, Elevators.—Union Sulphur Co. of Sulphur, La., has purchased 1000 feet of water-front property for the construction of docks, wharves, together with a chain of elevators and other equipment to facilitate the loading of ships.

San Antonio, Texas.—Sewerage System.—City council has made an appropriation of \$4000 for laying sewers in Laurel Heights. Address The Mayor.

Terrell, Texas.—Electric-light Plant.—City is considering the installation of electric-light plant. Address The Mayor.

Texas City, Texas.—Terminal Improvements.—It is reported that the Texas Investment Co. (a corporation with a nominal capital which will be increased to \$10,000,000 or more) has purchased the Texas City Terminal Co. and the Texas City Transportation Co., their properties including 1200 acres of land on the water-front at Texas City, on the west shore of Galveston bay, northwest of Galveston. Two large piers have been built, together with five warehouses for cotton and other merchandise, the piers being, respectively, 800x300 feet and 463x1200 feet, and further facilities of a similar character are to be provided. According to announcements in New York city, the new corporation will be provided with capital by Messrs. Charles M. Schwab of New York, J. R. McGinley of Pittsburgh, Pa.; H. H. Westinghouse of New York, John F. Miller of Pittsburgh, J. S. Kelf, also of Pittsburgh, and A. B. Wolvin of Duluth, Minn., the latter having heretofore been largely interested in the development of Texas City. Mr. McGinley is said to be president of the new Texas Investment Co.

Tyler, Texas.—Street-paving.—A contract has been let to Allen & Harris for street-paving; work to cost approximately \$3000. It is contemplated that much more paving will soon follow; John H. Bonner, mayor.

Waxahachie, Texas.—Gas Plant.—City has granted franchise to George W. Alt of Chicago, Ill., for the establishment of gas plant; water gas to be manufactured.

VIRGINIA.

Boykins, Va.—Knitting Mill.—It is reported that W. A. Powell, J. J. Powell and W. W. White will organize a \$20,000 stock company to build the knitting mill previously reported as proposed.

Carksville, Va.—Manufacturing.—Incorporated: Three Rivers Manufacturing Co., with an authorized capital stock of \$50,000. John M. Mast is president; Andrew H. Gochaner, treasurer, and John M. Miller, secretary, all of Lititz, Pa.

Hampton, Va.—Packing Plant.—Hampton Packing Co. has incorporated with an authorized capital stock of \$50,000 to engage in the packing and shipping of oysters and crabs. J. F. Brittingham is president; William F. Evans, vice-president and manager, and George W. Thompson, secretary-treasurer.

Houston, Va.—Fertilizers, etc.—Chartered: Houston Wholesale Grocery & Fertilizer Co., with an authorized capital stock of \$10,000. Frank Willingham is president, and Francis M. Cantine, secretary-treasurer.

Lynchburg, Va.—Land Improvement.—W. B. Keyes of Norfolk, Va., has purchased through John D. Langhorne 170 acres of land in West Lynchburg at \$50,000, which will be developed as suburban residence site, laying off in building lots, constructing concrete

sidewalks, asphalt roadways, sewer and water mains. (Mr. Langhorne was erroneously reported last week as the purchaser.)

Manchester, Va.—Safe and Lock Works.—Reports state that R. L. Barnes of the R. L. Barnes Safe & Lock Co., Richmond, Va., is investigating with a view to locating safe and lock plant. The erection of a factory building 150x300 feet, it is stated, is proposed.

Newport News, Va.—Mantel Factory.—Chartered: Concrete Block & Mantel Manufacturing Co., with \$40,000 capital stock. It has taken over and will operate the plant of the Southern Mantel Co. W. G. Melvin is president; F. M. Pope, vice-president, and F. B. Hobson, secretary-treasurer.

Norfolk, Va.—Manufacturing.—Incorporated: Inventors' Aid Manufacturing Co., with an authorized capital stock of \$100,000, by W. L. Fitzhugh, R. E. Carter and Joseph W. Lawler.

Norfolk, Va.—Bottling Works.—American Bottling Co. has been incorporated with an authorized capital stock of \$25,000. Joseph Salomonsky is president; I. Salomonsky, vice-president and general manager, and J. Salomonsky, secretary-treasurer.

Norfolk, Va.—Land Improvement.—Chartered: Boush-Tazewell Realty Corporation, with \$50,000 authorized capital stock. T. S. Southgate is president; James E. Heath, secretary-treasurer.

Norfolk, Va.—Water-power Plant.—Co-operative Water & Power Co. has been incorporated with A. B. Carney, president; Gordon Paxton, vice-president, and R. W. Peatross, secretary-treasurer; capital stock, \$100,000.

Norfolk, Va.—Bridge.—The Harbor Board has granted permission to the Elizabeth River Railroad Co. to build bridge over New Mill creek, mentioned June 21. The bridge will have double tracks and two open draws each 50 feet wide. Edward A. Buell is president.

Norfolk, Va.—Power-house.—Schofield Construction Co., Philadelphia, Pa., has contract at \$190,000 for construction of proposed power-house for Norfolk & Portsmouth Traction Co.; 168x157 feet, of heavy brick, concrete construction and heavy foundations; two stacks of 14 feet diameter, which will cost \$25,000.

Norfolk, Va.—Public Improvements.—It is reported that an appropriation of \$40,755.50 has been made for permanent improvements in Berkley ward. Address City Engineer.

Petersburg, Va.—Silk Dye Works.—Werres & Hinton Silk Dye Co., reported incorporated last week with capital stock of \$50,000, takes over the silk dye works of Werres & Hinton. The plant is equipped for dyeing silks, velvets, etc.; John H. Werres, general manager.

Richmond, Va.—Printing Plant.—G. Gibson Worsham and Charles A. Zinke have secured building 9-13 North 12th street for the establishment of printing plant. The most improved machinery will be installed, including five typesetting machines.

South Boston, Va.—Public Improvements.—Town will vote July 16 on the issuance of \$100,000 of bonds for public improvements. Address The Mayor.

WEST VIRGINIA.

Beckley, W. Va.—Water-works.—Dr. H. L. Kirkpatrick, J. E. Garrett, Alex. McNabb and associates have secured franchise for the installation of water-works, and have organized the Raleigh Water & Ice Co. with capital stock of \$75,000 for its construction and operation.

Bluefield, W. Va.—Coal and Timber Land.—It is reported that the W. M. Ritter Lumber Co. of Welch, W. Va., and Columbus, Ohio, has purchased for development 31,360 acres of timber land in Mercer and Wyoming counties. The timber land, it is stated, is underlaid with a number of seams of Pocahontas coal.

Bluefield, W. Va.—Coal Mines.—Jefferson Coal & Coke Co. will hold a meeting July 23 to consider issuing \$10,000 of bonds, the proceeds to be used in purchasing additional equipment.

Century, W. Va.—Incorporated: Guinn Neeley & Co., with \$20,000 capital stock, by G. Neeley of Century, S. A. Moore of Philippi, W. Va., and associates.

Charleston, W. Va.—Land Improvement.—Kanawha Land Co. has been organized with \$500,000 authorized capital stock by E. T. Crawford, W. L. Ashby, F. M. Staunton, Harrison B. Smith and associates. The company owns property near Charleston which will be developed as suburban residence site, expending several hundred thousand dollars in laying out, grading, sewerage, paving and otherwise improving same.

Charleston, W. Va.—Coal Mines and Coke Ovens.—Chelvan Land & Coal Co. has been incorporated with \$300,000 authorized capital

stock by W. G. Matthews, M. M. Williamson, F. M. Carnes and associates.

Clendenin, W. Va.—Drug Factory.—James A. Robertson, P. J. Robertson, W. P. Hevely and others have incorporated the Clendenin Drug Co. with \$10,000 capital stock.

Dana, W. Va.—Sawmill.—Mountain City Lumber Co., James Flynn, Charleston, W. Va., president, has about completed the installation of its eight-foot band mill, to have a daily capacity of 40,000 feet, on Campbell's creek, near Dana. It is estimated that about 20,000,000 feet of timber is available, and after it is cut it is proposed to move the mill to Hominy creek, 80 miles further north, where the company owns 8000 acres of timber land.

Hinton, W. Va.—Land Improvement.—Chartered: Riverview Land Co., with \$300,000 capital stock, by E. Grice, O. O. Cooper, W. H. Garnett and others.

Huntington, W. Va.—Street-paving.—F. E. Dean of Niagara Falls, N. Y., it is reported, has secured contract at \$65,000 for paving various streets previously mentioned.

Smithton, W. Va.—Oil and Gas Wells, etc. Dominion Utility Co. has incorporated with an authorized capital stock of \$50,000 to drill for oil and gas, operate pipe lines, etc.; incorporators, J. A. McLane of Grafton, W. Va.; J. E. Strainer, Geo. M. McLane, W. A. McLane of West Union, W. Va., and others.

Swiss, W. Va.—Sawmill.—Flynn Lumber Co., Charleston, W. Va., is proceeding with the installation of its eight-foot band-saw mill with a daily capacity of 40,000 to 45,000 feet for the development of 10,000 acres of land, principally oak and poplar lumber. James Flynn is president.

Wheeling, W. Va.—Candy Factory.—Ohio Valley Candy Co. has been incorporated with an authorized capital stock of \$10,000 by D. C. Cochran and others.

Winifrede, W. Va.—Real Estate.—C. R. Cavness and others have incorporated the Winifrede Realty Co. with \$5000 capital stock.

INDIAN TERRITORY.

Ada, I. T.—Sewerage System.—City is considering issuing bonds for the construction of sewerage system. Address The Mayor.

Tulsa, I. T.—Paving.—City is arranging for paving 10,000 square yards, including 3000 yards of excavating, and bids for the work will be received until July 23; W. D. Abbott, recorder.*

Tulsa, I. T.—Water-works and Parks.—City will issue \$100,000 of bonds for the purchase of local water-works or the construction of municipal system and \$25,000 for public parks. Address The Mayor.

OKLAHOMA TERRITORY.

Bickford, O. T.—Gypsum-products Factory. Roman Nose Gypsum Co., reported incorporated June 28 under Jackson, Miss., will manufacture all kinds of high-grade gypsum products, having a daily capacity of 200 tons. Building has been erected and machinery is being installed; about \$150,000 expended in buildings and equipment. G. Heller is engineer in charge.

Burmah, O. T.—Cotton Gln.—Burmah Union Gln Co. has been incorporated with \$3500 capital stock by E. P. Kiker, G. C. Detmerter and associates.

Dill, O. T.—Cotton Gln, etc.—P. W. Hamill, Smith Hubbard, W. A. Vickers, H. W. Dalsey and others have incorporated the Farmers' Gln & Elevator Co. with \$6000 capital stock.

Guthrie, O. T.—Street-paving.—Barber Asphalt Paving Co. of Cleveland, Ohio, has contract to pave East Warner avenue from Oak street to the Boulevard with asphalt.

Mangum, O. T.—Construction Company.—Colorado, Texas & Mexican Construction Co. has been incorporated with \$100,000 capital stock by T. N. Slaten of Mangum, Morris R. Locke, John W. Blackburn of Abilene, Texas.

Oklahoma City, O. T.—Oil Refinery.—Caney Refining Co., reported incorporated last week with \$100,000 capital stock, will operate plant with a daily capacity of 700 barrels of refined products of petroleum. It is proposed to erect two stills 10x24 feet, one agitator 10x6x16 feet, four tanks 20x10 feet, two tanks 15x10 feet, two bleachers 20x5 feet, one steel still, one tank 30x20 feet, one tank 38x25 feet; about \$30,000 will be expended in buildings and equipment; J. R. Timmons, engineer in charge; W. A. Coutant, secretary-treasurer.

Ponca, O. T.—Water-works and Sewerage.—Town will vote July 31 on the issuance of \$22,000 of bonds for extending water and sewerage systems. Address Town Clerk.

BURNED.

Bluff Springs, Fla.—G. R. Stanton's saw and planing mill.

Charlotte, N. C.—Jasper Miller & Son's waste-cleaning plant.

Covington, Ky. — Wm. Reidlin Bavarian Brewery; loss \$7000.

Covington, Tenn. — Gulf Compress Co.'s plant; loss \$50,000.

Corinth, Miss. — Adams Machine Works reported damaged; loss \$150,000.

De Funiak Springs, Fla. — Bloch, Rogers & Co.'s planing mill and office building; loss \$20,000.

Frisco, Texas. — Frisco Gin & Elevator Co.'s cotton gin; loss \$10,000.

Gulfport, Miss. — Stag Hotel, owned by J. W. Banfill of Bonifay, Fla.; city jail building; loss \$3000.

Higginsville, Mo. — Higginsville Milling Co.'s mill and elevator; loss \$75,000.

Longview, Texas. — Southern Hotel; loss \$5000.

Luray, Va. — A. P. Printz & Son's planing mill.

Newberry, S. C. — The lumber plant of H. O. Workman and Palmer Lewis.

New Orleans, La. — Sea Gull Specialty Baking Powder Co.'s plant; loss \$12,000.

Pocomoke City, Md. — William B. Duncan's barrel factory.

Shreveport, La. — Hamiller & Busby's warehouse; loss \$50,000.

Silabec, Texas. — Kirby Lumber Co.'s mills; loss \$700,000; general offices, Houston, Texas.

Tarboro, N. C. — Speed Milling Co.'s cotton gin; loss \$4000.

BUILDING NOTES.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

Alexandria, Va. — Apartment-house. — Alexandria Apartment-House Co. is the title of company reported June 28 as organized with J. Marriott Hill, president; W. A. Smoot, Jr., vice-president, both of Alexandria; Henry J. Blauvelt, secretary, and George W. White, treasurer, both of Washington, D. C. A five-story apartment-house was previously reported to be erected at a cost of \$125,000.

Americus, Ga. — Warehouse. — T. F. Lockwood, Columbus, Ga., is preparing plans for warehouse mentioned July 5 to be erected by the Standard Warehouse Co.; one story, 100x300 feet; concrete and stone; fireproof construction; gravel roof; electric lights and gas; two freight elevators from basement to first floor; automatic sprinklers; cost \$13,000.*

Amite City, La. — Church. — Methodist congregation is reported as arranging for the erection of edifice. L. C. Wilson is pastor.

Amite City, La. — School Building. — Town will vote August 6 on a \$15,000 bond issue for the erection of a brick or cement school building. Address Town Clerk.

Annapolis, Md. — Gun Shed. — Penn Bridge Co., Beaver Falls, Pa., has contract at \$23,980 for the construction of proposed gun shed at the Naval Academy.

Argenta, Ark. — School Building. — Committee on Buildings and Grounds of the School Board will receive bids until July 27 for the erection of two-story brick-veneer building after plans by Ely Blount.

Atlanta, Ga. — Apartment-house. — Hugh Richardson has purchased site on which it is stated an apartment-house will be erected.

Atlanta, Ga. — Flat Building. — Bruce, Everett & Hayes, 706 English-American Building, are preparing plans for a three-story flat building to be erected at a cost of \$30,000; brick; stone; concrete; gravel roof; electric and gas fixtures; plumbing; steam heat; elevators.

Atlanta, Ga. — Store Building. — W. W. Griffin will supervise the erection of store building for S. R. Richards after plans by R. H. Carpenter; cost \$30,000.

Atlanta, Ga. — Auditorium and Infirmary. — Baptist Tabernacle Church, Dr. Broughton, pastor, has purchased site on which to erect 8 or 10-story auditorium to cost about \$250,000. Site has also been purchased on which to erect an infirmary.

Atlanta, Ga. — Building. — G. L. Norman is preparing plans for the remodeling and enlargement of the parsonage of Trinity Methodist Church. From \$5000 to \$10,000 will be expended.

Augusta, Ga. — School Building. — T. O. Brown & Son have contract at \$60,150 for the erection of school building in the Fifth ward. Messrs. Brown & Son were previously awarded the contract, but owing to some technicality contract was canceled and bids again advertised.

Augusta, Ga. — Flat Building. — Bruce, Everett & Hayes, 706 English-American Building,

Atlanta, Ga., are preparing plans for a three-story flat building; brick; stone; terracotta; marble; concrete; gravel roof; electric and gas fixtures; plumbing; steam heat; elevators; cost \$40,000.

Austin, Texas. — Building. — The University of Texas is arranging for the erection of law building; two stories, 192x108 feet; pressed brick, steel and concrete with limestone trimmings; trussed roof of slate or tile; iron stairways; steam heat; electric lights. It is stated that plans will be ready for bidders about July 21.

Baltimore, Md. — Engine-house. — The municipal Board of Awards has awarded contract to J. H. Miller, 110 Dover street, at his bid of \$27,487 for the construction of fire-engine house on Park Heights avenue; two stories, 60x125 feet; brick with granite base and stone and terra-cotta trimmings; structural iron and steel; metal ceilings; galvanized-iron cornice and skylight; electric wiring and fixtures; sanitary plumbing; hot-water-heating system. Plans were prepared by Inspector of Buildings E. D. Preston, City Hall.

Baltimore, Md. — Truckhouse. — The municipal Board of Awards, City Hall, has awarded contract to James F. Farley, 207 North street, for the construction of truckhouse at 849 Frederick road at his bid of \$27,873; two stories, 60x100 feet; brick with granite base and terra-cotta trimmings; structural iron and steel; metal ceilings; tin roof; electric wiring and fixtures; sanitary plumbing; hot-water-heating system. Plans were prepared by Inspector of Buildings E. D. Preston, City Hall.

Baltimore, Md. — Warehouse. — Edward Brady & Son, 1113 Cathedral street, are estimating on the construction of warehouse on Gay street between Lombard and Pratt streets for the Merchants & Miners' Transportation Co., southeast corner Light and German streets; five stories, 50x90 feet; reinforced-concrete construction throughout; slag roof; electric wiring and fixtures; sanitary plumbing; elevator; metal frames and sashes; Charles E. Cassell & Son, architect, Law Building, 223-25 Courtland street.

Baltimore, Md. — Stable. — Wm. J. Tickner & Sons, 421-425 West Camden street, will erect stable on Perry near Eutaw street; two stories, 50x100 feet; brick with stone trimmings; structural iron and steel. B. F. Bennett, 123 South Howard street; J. H. Miller, 110 Dover street; E. D. Preston, Gunther Building, St. Paul and Fayette streets; Geo. Bunnecke & Sons, 305 St. Paul street; M. C. Davis, 5 Hopkins Place, and B. W. E. Minor, 20 Clay street, are estimating on construction; Haskell & Barnes, architects, Central Savings Bank Building, 3 East Lexington street.

Baltimore, Md. — Apartment-house. — George E. E. Timanus, 1311 Maryland avenue, will remodel the three-story brick dwellings at 1307, 1309 and 1311 Maryland avenue into an apartment-house. Electric wiring and fixtures, sanitary plumbing and heating system will be installed; cost of improvements about \$20,000; Clarence E. Anderson, architect, 726 Law Building, Courtland near Lexington street.

Baltimore, Md. — Penitentiary. — Sealed proposals will be received until July 16 by the board of directors of the Maryland Penitentiary for erecting female dormitories, the work to consist of excavating, stone, brick and reinforced concrete work, asphalt roof, metal frames and sashes, skylights, etc. Plans and specifications may be obtained from Charles M. Anderson, architect, 324 North Charles street. Bids were opened for this work on July 5, but all were rejected except that for the steel-cell work, which was awarded to Bandom Iron Works, Cleveland, Ohio, at its bid of about \$38,000. The total amount of the appropriation for the work is \$134,000. B. F. Bennett, 123 South Howard street; Richmond H. Ford & Co., Equitable Building, Fayette and Calvert streets; D. M. Andrews & Co., Vickers Building, 225 East German street; J. J. Miller, 110 Dover street; Morrow Bros., 212 Clay street; George Bunnecke & Sons, 305 St. Paul street; Charles W. Simpson, 415 East Lexington street; Henry S. Rippel, 7 Clay street; M. C. Davis, 5 Hopkins Place; Thomas P. Johns, 405 McCulloh street; Monmonier & Sorrell, 308 Laurens street; Rullman & Wilson, Lafayette and Mt. Royal avenues, and McCulloh Company are estimating on the work.

Baltimore, Md. — Store Building. — H. J. Musselman, trustee, Abell Building, Baltimore and South streets, will erect store building at southwest corner Lexington and Paca streets; two stories, 35x60 feet; brick with stone and terra-cotta trimmings; mill construction; slag roof; steam-heating system; electric wiring and fixtures; elevator. R. H. Frazier & Sons, 220 St. Paul street; Thomas L. Jones & Son, 410 West Saratoga

street; James F. Morgan, 1300 South Charles street, and E. D. Preston, Gunther Building, Lexington and St. Paul streets, are estimating on the construction; Charles E. Cassell & Son, architects, Law Building, Courtland near Lexington street.

Baltimore, Md. — Home. — The Margaret J. Bennett Home, 14 East Franklin street, will erect a two-story and basement addition, 28x40 feet, in the rear of its present building at 14 East Franklin street. B. F. Bennett, 123 South Howard street, is estimating on the work; Charles E. Cassell & Son, architects, Law Building, Courtland near Lexington street.

Baltimore, Md. — Dwellings. — Pliny P. Day, builder, 2140 West Baltimore street, will erect 10 two-story brick dwellings on Slingluff avenue between North and Westwood avenues to cost about \$12,000; Jacob F. Gerwig, architect, Hoffman Building, 11 East Lexington street.

Baltimore, Md. — Dwellings. — Charles H. Stoner, builder, 1927 West Lombard street, will erect 10 two-story brick dwellings on Edmondson avenue near Payson street to cost about \$22,000; Jacob F. Gerwig, architect, Hoffman Building, 11 East Lexington street.

Baltimore, Md. — Store. — Alexander Yearley & Son, Builders' Exchange Building, 2 East Lexington street, have awarded contract to McIver & Piel, Builders' Exchange Building, for general alterations to three-story store building at northwest corner Lexington and Greene streets.

Baltimore, Md. — Warehouse. — The Safe Deposit & Trust Co., 9-13 South street, has awarded contract to Julius E. Pyles, 410 Dover street, for general alterations and reconstruction of walls to warehouse at 302 West Baltimore street.

Baltimore, Md. — Dwellings. — The Edmondson Realty Co. has been incorporated with capital stock of \$300,000 to engage in real-estate business. As recently reported, it has purchased lots on Edmondson, Harlem and Lafayette avenues and other adjoining streets and will erect about 1780 two and three-story brick dwellings to cost about \$2000 each. Robert M. Spedden, Third National Bank, Baltimore and North streets; Robert H. Smith, 620 Equitable Building, Calvert and Fayette streets; J. Henry Smith Strohmeyer, 620 Equitable Building; John K. McIver and John F. Piel, Builders' Exchange Building, 2 East Lexington street, are the incorporators. McIver & Piel, builders, Builders' Exchange Building, 2 East Lexington street, will construct the buildings.

Baltimore, Md. — Warehouse. — O. F. H. Warner & Co., 15-19 East Camden street, have awarded contract to J. H. Miller, 110 Dover street, for the construction of warehouse at 104 and 106 East Lombard street; four stories, 46x135 feet; brick with stone trimmings; mill construction; electric wiring and fixtures; sanitary plumbing; heating system; elevator; Henry Brauns, architect, Professional Building, 330 North Charles street.

Baltimore, Md. — Dwellings. — Joseph L. White, builder, 115 South Broadway, has purchased lot on East avenue near Lombard street and will erect a number of two-story brick dwellings on the site, which is 75x172 feet.

Baltimore, Md. — Dwellings. — The Forest Park Company has awarded contract to Frank H. Callaway, Forest Park, for the construction of five three-story frame dwellings to cost about \$15,000.

Baltimore, Md. — Dwellings. — Mrs. Mary Warfield has awarded contract to George E. Warfield, 1946 West Lexington street, for the construction of seven two-story brick dwellings on Cedar near Colwell avenue to cost about \$9000; F. E. Beall, architect, 213 St. Paul street.

Baltimore, Md. — Dwelling. — Francis A. White, Jr., 15 North street, has commissioned Archer & Allen, architects, Central Savings Bank Building, 3 East Lexington street, to prepare plans and specifications for dwelling to be erected at Normandle Heights, a suburb of Baltimore.

Baltimore, Md. — Bank Building. — The Colonial Trust Co., 13½ West Saratoga street, has awarded contract to Norcross Bros. Company, Clay near Charles street, for the construction of its bank building at 7-11 West Saratoga street; one story and basement, 66.6x45 feet; marble exterior with granite base; reinforced-concrete construction; interior marble; slag roof; ornamental cast-iron doors; cast-iron frames and sashes; vault lights; galvanized-iron skylights; sanitary plumbing. Electric wiring and fixtures and heating system not included in contract; Elliott & Emmart, architects, Union Trust Building, Charles and Fayette streets.

Baltimore, Md. — Office and Store Building.

Felix Isman and George Q. Horwitz, both of Philadelphia, Pa., and represented by the Realty Corporation, 8 East Lexington street, are perfecting plans for the erection of two-story reinforced-concrete store and office building at southwest corner Lexington and St. Paul streets to cost about \$40,000.

Baltimore, Md. — Warehouse. — George Schmidt and Elias Schmidt, 300 East Pleasant street, have awarded contract to George Bunnecke & Sons, 305 St. Paul street, for the construction of warehouse at 24 Hopkins Place; five stories, 24x70 feet; brick with stone and terra-cotta trimmings; structural iron and steel; electric wiring and fixtures; sanitary plumbing; steam-heating system; elevator; cost about \$15,000; Louis Levi, architect, American Building, Baltimore and South streets.

Batesburg, S. C. — Hotel. — Architect has not been engaged to make plans for hotel building to be erected by M. E. Rutland; three stories, 46x110 feet; mill construction; steam heat; electric fixtures; cost \$10,000. It was stated July 5 that a lively stable would be improved as three-story hotel. Contract will be let August 1.

Beaumont, Texas. — Masonic Temple. — Plans and specifications are being received by C. E. Walden, chairman of building committee, for Masonic Temple previously reported to be erected by the Masonic Temple Co. at a cost of \$25,000.

Beauvoir, Miss. — Hospital. — Board of trustees of the Soldiers' Home has adopted plans for proposed hospital building. T. M. Henry is secretary.

Birmingham, Ala. — Opera-house. — Columbia Amusement Co. of New York, N. Y., it is reported, has leased the O'Brien Opera-House, which will be remodeled and improved at a cost of \$10,000.

Bluefield, W. Va. — Dwellings. — Dr. Thomas Peery has let contract for the erection of two residences after plans by Walter J. Smith; cost \$7000.

Bramwell, W. Va. — Dwelling. — Walter J. Smith is preparing plans for E. B. Lee's proposed \$5000 residence.

Brenham, Texas. — School Building. — City is completing arrangements for the erection of proposed \$25,000 school building. Address Mayor Lusk.

Bridgeport, Texas. — Cotton Warehouse. — G. A. Powers, J. M. Blocker and P. W. Terrell, committee appointed by the Farmers' Union to arrange for the erection of cotton warehouse, have completed plans for a building of frame construction with iron roof and walls, 50x200 feet; capacity 2000 bales.

Bristol, Va. — Hotel. — Dr. George E. Wiley and Dr. H. B. Edmondson will organize the Intermont Hotel Co. with \$90,000 capital stock to erect hotel.

Brownwood, Texas. — Hotel. — Bids are being received for hotel previously reported to be erected by Mrs. R. Utterback of Brady, Texas, and associates; three stories; ordinary construction; steam heat; electric lights and elevators; cost \$20,000.

Carmen, O. T. — Lodge Building. — Bids marked "Proposals for the Odd Fellows' Home" will be received by G. W. Bruce, secretary committee, or by H. L. Stough, grand secretary I. O. O. F., at office of grand secretary, Guthrie, O. T., until July 20, for furnishing material and labor necessary for erection of Odd Fellows' Home, according to plans and specifications on file at office of grand secretary; also at the Carmen National Bank, Carmen; Chandler National Bank, Chandler, O. T.; place of business of J. L. Reger, Enid, O. T.; place of business of W. H. Leininger, Lawton, O. T., and at 615 Central avenue, Oklahoma City, O. T. Certified check for \$500, payable to H. W. Leininger, treasurer of committee, must accompany bid. Usual right reserved.

Carthage, Mo. — Dwelling. — A. A. Ramsey is having plans prepared by Robert H. Farley for a two-story residence, 40x60 feet, of brick, to cost \$15,000. Electric fixtures, tilework and mantels will be included in the equipment.

Charleston, S. C. — Church. — Plans have been completed by William Martin Alken of New York, N. Y., for improvements to St. Paul's Episcopal Church. Dr. W. H. Bowers is pastor.

Charleston, S. C. — Police Station. — Plans are being submitted by architects for police station to be erected at a cost of \$60,000. Address The Mayor.

Chesterfield, S. C. — Bank Building. — Bank of Chesterfield has purchased site on which to erect a two-story bank building.

Clarksville, Ark. — Jail Building. — Bids will be received until July 30 for the erection of jail building for Johnson county after plans by Southern Steel Co., San Antonio, Texas; three stories, 25x35 feet; fireproof construc-

tion; electric fixtures; cost \$10,000; E. T. McConnell, F. B. White, Oscar Blackard, commissioners.

Conway, S. C.—Church.—First Baptist congregation is having plans prepared by Henry E. Bonitz, I. O. O. F. Building, Wilmington, N. C., for a press-brick edifice with slate roof, to cost \$10,000. Cathedral glass, rolling partitions, pipe organ and warm-air system of heating will be installed.

Cotton Plant, Ark.—Dormitory.—Board of Missions for Freedmen, 513 Bessemer Building, Pittsburg, Pa., will receive bids until July 14 for the erection of a two-story and basement brick dormitory at Cotton Plant. Plans and specifications can be seen at E. R. Hysmith's market or at Cotton Plant Academy, W. A. Byrd, principal.

Dallas, Texas.—Church.—Tabernacle Methodist Church is reported to erect a \$30,000 edifice. Address The Pastor.

Dallas, Texas.—Flat Building.—Lang & Wittell are completing plans for a two-story brick and stone apartment-house, 47x147 feet, to be erected by J. Howard Ardley at a cost of \$20,000.

Dallas, Texas.—Building.—Plans are being completed for three-story brick and stone building, 50x90 feet, to be erected by Mrs. F. B. Hite at a cost of \$20,000.

Douglas, Ga.—Church.—A. S. Morton, Waycross, Ga., has contract at \$12,500 for the erection of brick edifice for Methodist church after plans by George C. Thompson, Candler Building, Atlanta, Ga.

Eastman, Ga.—Courthouse.—M. T. Lewman & Co., Louisville, Ky., have contract at \$70,000 for the erection of courthouse for Dodge county, for which Edward C. Hosford was mentioned May 10 as preparing plans; first floor to be fireproof; second and third floors ordinary construction.

Flaton, Texas.—Store Building.—Allen Bros. have contract to erect building for Cowdin Grocery Co.

Florence, S. C.—Church.—Henry E. Bonitz, I. O. O. F. Building, Wilmington, N. C., is preparing plans for edifice to be erected by St. James Lutheran Church; hollow concrete; slate roof; cathedral-glass windows; cost \$6000.

Fortress Monroe, Va.—Hotel.—A bill has been passed by Congress authorizing the Secretary of War to grant permission to F. W. Shield and Robert McCandlish of Norfolk, Va., to build a hotel on the government reservation for use during the Jamestown Exposition.

Fort Worth, Texas.—Church.—C. W. Forbes has contract to erect edifice for the First Baptist Church, previously reported. Smith & Schenck prepared the plans.

Frederick, Md.—Pythian Castle.—Pythian Castle Association, Knights of Pythias, has purchased site on which to erect \$25,000 building previously referred to.

Frederick, Md.—Telephone Exchange.—Chesapeake & Potomac Telephone Co. has purchased site on which it is stated a \$20,000 exchange building will be erected; general offices, Washington, D. C.

Gage, O. T.—Warehouse.—G. W. Keneaster, Elmer V. Jesse and L. P. Jennings have incorporated the Gage Warehouse & Storage Co. with \$10,000 capital stock.

Greenville, S. C.—Sanitarium.—C. C. Wilson, Columbia, S. C., is preparing plans for two-story sanitarium of 30 rooms for the Southern Oaks Sanitarium Co.; ordinary construction; steam heat; electric fixtures; cost \$10,000 to \$12,000. (Dr. L. G. Corbett was mentioned March 15 in connection with this enterprise.)

Hattiesburg, Miss.—College Buildings.—South Mississippi College, W. I. Thames, president, mentioned in issue of July 5 to rebuild college building recently burned at Poplarville, Miss., removing same to Hattiesburg, will erect a college building to accommodate about 500 students, a boys' dormitory to accommodate 200 boys, girls' dormitory to accommodate 100 girls, small infirmary, kitchen, dining-hall and heating station (steam or water) for entire establishment; buildings to be of frame. Plans are solicited from architects.*

Heflin, Ala.—Courthouse.—Charles W. Carlton of Anniston, Ala., has been engaged to prepare plans and specifications for Cleburne county's proposed courthouse.

Hickory, N. C.—Dormitory.—Wheeler, Runge & Dickey of Charlotte, N. C., have completed plans for dormitory to be erected at Lenoir College at a cost of \$20,000.

High Point, N. C.—Church.—Baker & Smith have contract to erect edifice for the South Main Street M. E. Church, mentioned May 31; building to be of brick, 44x44 feet, and cost \$8000. Wheeler, Runge & Dickey, Charlotte, N. C., prepared the plans.

Houston, Texas.—Clubhouse.—Seabrook Fishing and Hunting Club is arranging for the erection of a three-story clubhouse to contain 100 rooms. O. S. Cochran is secretary.

Houston, Texas.—Dwelling.—W. C. Munn has secured permit for the erection of proposed \$7800 residence.

Houston, Texas.—Church.—Architect has not been selected for edifice mentioned July 5 to be erected by the Central Christian Church to cost \$35,000. Address The Pastor.

Independence, Mo.—Lodge Building.—Joseph Becker has contract at \$13,450 for the erection of proposed three-story lodge building for the Modern Woodmen Camp.

Independence, Va.—Courthouse.—Board of Supervisors of Grayson county will receive bids until July 9 at office of S. B. Bryant, clerk, Independence, Va., for erection of courthouse according to plans and specifications on file at county clerk's office, also at office of Frank P. Milburn & Co., architects, Home Life Building, Washington, D. C. Applications for plans and specifications must be accompanied by certified check for \$25, payable to E. C. Fulton, chairman county supervisors, Independence, Va. Certified check for \$500, payable to E. C. Fulton, must accompany each bid. Usual rights reserved.

Jacksonville, N. C.—Bank Building.—Henry E. Bonitz, I. O. O. F. Building, Wilmington, N. C., is preparing plans for building to be erected by Bank of Onslow; Indiana limestone front; tin roof; ordinary construction; cost \$4500.

Jonesboro, Ark.—Association Building.—The building to be erected by the Young Men's Christian Association, for which Theo. C. Link, St. Louis, Mo., was mentioned July 5 as preparing plans, will be three stories, 75x90 feet; brick and stone; ordinary construction; hot-water-heating plant; cost \$30,000.

Kansas City, Mo.—Church.—The First Congregational and Clyde Congregational churches, which have been consolidated, it is reported, will erect a \$100,000 edifice. E. E. Holmes is chairman of building committee.

Knoxville, Tenn.—Apartment-house.—C. A. Nickerson is having plans prepared for the erection of three-story brick apartment-house 8x95 feet.

Lagrange, Ga.—Building.—Butt & Morris, Atlanta, Ga., are preparing plans for fireproof building 50x150 feet, to be erected by the West Point Grocery Co. of West Point, Ga. Heavy freight elevators will be installed.

Lake Charles, La.—Lodge Building.—Local lodge B. P. O. E. is considering the erection of a \$15,000 building.

Little Rock, Ark.—School Building.—Wm. M. Kavanaugh, president committee on new buildings, Little Rock School Board, will receive bids until July 14 for the erection of the Rightsell Building. Plans and specifications may be seen at office of Gibb & Sanders, architects. Certified check for \$500, payable to the Little Rock School Board, must accompany each bid. Usual rights reserved.

Little Rock, Ark.—Warehouse.—Thomas Cox & Son Machinery Co. will erect a two-story brick warehouse 66x90 feet to cost \$10,000.

Little Rock, Ark.—Warehouse.—Collamore & Stanton have contract to erect warehouse for Thomas J. Darragh, for which Mann & Downey were reported April 19 as preparing plans; two stories, 80x200 feet; cost \$14,000.

Lockhart, Texas.—School Building.—R. S. Hodges has completed plans for two-story school building previously reported to be erected; ordinary construction; electric fixtures; cost \$10,000 to \$12,000. Jas. G. Burleson, president school board.

Loch Raven, Md.—Barn.—Building committee of the House of Refuge is arranging for the erection of a barn to cost \$8000 and large enough to accommodate from 15 to 20 head of cattle and as many horses and supplies from 150 to 200 acres of land. Maurice Laupheimer is secretary of the committee; offices, Calvert Building, Baltimore, Md.

Louisville, Ky.—Bank and Office Building.—J. N. Struck & Bros. have contract to erect proposed 14-story building for the Lincoln Savings Bank.

Marshall, Texas.—City Hall.—City will vote August 1 on a \$45,000 bond issue for the erection of city hall. Address The Mayor.

Memphis, Tenn.—Cotton Warehouse.—Construction work has begun on cotton warehouse for Memphis Warehouse Co., for which the Selden-Breck Construction Co., Fullerton Building, St. Louis, Mo., has contract. It is proposed to expend \$500,000 on the building this summer to take care of half the crop for this fall, and to expend \$500,000 next summer, completing building by fall of 1907. A trolley equipment for handling the bales will be installed, dispensing with labor. (This

building has been referred to at various times in this department, and the Selden-Breck Construction Co. was mentioned June 7 as having contract for the construction.)

Memphis, Tenn.—Apartment-house.—M. T. Lewman & Co., Louisville, Ky., have contract to erect apartment-house for Robert Galloway of New York, N. Y., and associates after plans by L. M. Weathers; six stories, 88x148 feet; brick and steel; fireproof; cost \$200,000.

Memphis, Tenn.—Amusement Resort.—Lake View Traction Co., Thomas Taggart of Indianapolis, Ind., president, has purchased 84 acres of land at Lake View, which will be improved as amusement resort, erecting hotel, etc.

Memphis, Tenn.—Warehouse and Office Building.—Benedict, Warren & Co. will erect a five-story warehouse and office building to cost \$100,000.

Memphis, Tenn.—Courthouse.—Shelby County Courthouse Commissioners, Memphis, Tenn., will receive bids until September 5 for general work, plumbing, gas and drainage work, electric work, heating and ventilating work, street fronts of marble, granite, stone or brick and terra-cotta in construction of courthouse in accordance with plans and specifications on file at office of Hale & Rogers, architects, 11 East 24th street, New York, or 1615 Ashland Block, Chicago, Ill., or office of commissioners, Memphis. Contractors may procure plans and specifications by writing to architects at New York, stating on which work they desire to bid, and depositing a certified check for \$100, payable to the architects. Duplicate copies of plans and specifications may be obtained from architects on deposit of an additional \$100, 50¢ of which will be repaid on return of plans and specifications in good condition. It is the intention to allow plans and specifications to bidders on general work for 21 days; to bidders on other branches enumerated above 14 days. In order that bidders located at a distance from New York will suffer no disadvantage the architects allow such extra time as, in their judgment, will be sufficient for the transportation of plans to and from New York city. For each day's delay in returning plans and specifications \$1 will be charged for each set. Usual rights reserved; Levi Joy, secretary.

Memphis, Tenn.—Bank and Office Building.—North Memphis Savings Bank has purchased site on which to erect bank and office building to cost \$60,000.

Memphis, Tenn.—Dwelling.—Contract has been let for residence reported last week to be erected by Mrs. A. R. Taylor; two stories; hot-water-heating plant; electric fixtures; cost \$9000; Jones & Furlinger, architects.

Memphis, Tenn.—Office Building.—Selden-Breck Construction Co., Fullerton Building, St. Louis, Mo., has received contract to erect the proposed 15-story office building of the Tennessee Trust Co.

Meridian, Miss.—Cotton Warehouses.—Gulf Compress Co. is reported as arranging for the erection of six department warehouses to be equipped with automatic sprinklers. About \$40,000 will be expended.

Middlesboro, Ky.—Bank Building.—Citizens' Bank & Trust Co. will expend between \$4000 and \$5000 in remodeling as bank building three-story brick building recently purchased.*

Millen, Ga.—Courthouse.—H. C. Morrison, Augusta, Ga., has contract at \$42,750 for the erection of Jenkins county courthouse.

Mullins, S. C.—Church.—Henry E. Bonitz, I. O. O. F. Building, Wilmington, N. C., is preparing plans for brick and stone edifice to be erected by the First Baptist Church at a cost of \$15,000.

Nashville, Tenn.—Dwelling.—Dr. D. W. Sumpter has let contract for the erection of proposed two-story dwelling after plans by Robert Sharp; cost \$7500.

Nashville, Tenn.—Stable.—A. B. Vaughan has contract to erect livery stable for Thuss Bros. to be occupied by the Trousdale Livery Co.; the building to be two stories and basement; brick, 50x175 feet; electric elevator as well as runway and stairways; 125 stalls will be located in the basement, a portion being box stalls; 16 box stalls and carriage-room on the ground floor. About \$10,000 will be expended. Thomas S. Marr prepared the plans.

Newbern, N. C.—Lodge Building.—Contract will be let August 12 for lodge building mentioned June 23 to be erected by Newbern Lodge No. 764, B. P. O. E.; five stories, 70x100 feet; ordinary construction; steam heat; gas and electric fixtures; hydraulic or direct water elevators; cost \$55,000 to \$60,000; Wm. P. Rose, Raleigh, N. C., architect. J. B. Blades is president and Wm. Dunn is secretary building committee.*

Newnan, Ga.—Warehouse.—Farmers' Warehouse Co. has let contract to E. B. Pitts, Atlanta, Ga., for erection of one two-story building, 75x150 feet, and three one-story

buildings, each 150x58 feet; brick with concrete floor; fireproof; electric fixtures; electric elevators; cost \$35,000; A. F. Walker, Atlanta, Ga., architect. (Company was mentioned last week as to erect cotton warehouse.)

New Orleans, La.—Apartment-house.—Jas. Geary has contract to erect apartment-house for Winfield Gauche, mentioned July 5; building to be of brick and stone, 75x78 feet; steam heat; electric fixtures; cost \$40,000; Stone Bros., architects.

Norfolk, Va.—Hotel.—E. Tattersson is lowest bidder at \$172,832 and will be awarded contract for the erection of the Lynnhaven Hotel after plans by John I. Peebles. Norfolk Realty Corporation will erect and operate same.

Norfolk, Va.—School Building.—Plummer & Co. have contract to make improvements to schoolhouse at Lambert's Point at a cost of \$7000.

Norfolk, Va.—School Buildings.—Bids will be received until July 20 by the School Board at the office of Richard A. Doble, superintendent, 25 Williams street, for the erection of two school buildings—first building on Omohundro avenue and 14th street. Complete detailed plans, specifications and conditions will be furnished by Arnold Eberhard, architect. Second building on Chapel street. Complete detailed plans, specifications and conditions will be furnished by John Kevan Peebles, architect; School Board reserves usual rights; Edmund S. Ruffin, chairman.

Palestine, Texas.—Church.—J. H. Gaught has contract to erect proposed \$25,000 edifice for the Centenary Methodist Church.

Pensacola, Fla.—Dwellings.—W. W. Alfred has completed plans for a two-story frame residence to be erected by Caleb Burgoyne at a cost of \$5000. Same architect has also completed plans for Walter Norman's proposed two-story frame residence; cost \$4000.

Phillips, I. T.—School Building.—Town has voted a \$5000 bond issue for the erection of school building. Address Town Clerk.

Port Norfolk, Va.—School Building.—Chas. F. Harper has contract to erect brick and stone school building at Port Norfolk.

Prentiss, Miss.—Courthouse and Jail.—Board of supervisors of Jefferson Davis county has adopted plans and specifications by W. S. Hull, Jackson, Miss., for courthouse, and of Youngblood & Co. for jail building, previously referred to. The contract for erection will be let at the next meeting of the board.

Richmond, Va.—Telephone Exchange.—The building to be erected by the Southern Bell Telephone & Telegraph Co., for which E. L. Myers, Norfolk, Va., was mentioned July 5 as having contract, will be six stories, 68x92 feet; hollow tile; fireproof construction; hot water; electric fixtures and equipment throughout; cost \$130,000; contract price \$92,874, and not \$22,874, as recently mentioned.

Royce City, Texas.—School Building.—Oscar McGraw has contract at \$11,510.70 for the erection of school building previously mentioned.

Rutherfordton, N. C.—Bank Building.—Citizens' Bank is reported to erect office building.

Rutherfordton, N. C.—Buildings.—It is reported that D. F. Morrow will arrange at once for the erection of buildings replacing structures recently burned.

Salisbury, N. C.—Jail Building.—Rowan County Commissioners will hold a meeting July 17 to select plans and determine the cost of erection of jail building; A. L. Smoot, clerk.

San Antonio, Texas.—Clubhouse.—San Antonio Club is arranging for the erection of a \$20,000 addition.

San Antonio, Texas.—Depot.—International & Great Northern Railroad, J. D. Trammel, Palestine, Texas, chief engineer, it is reported, will let contract August 15 for the erection of depot, mentioned March 15; to be of brick, 110x110 feet, and cost \$100,000.

San Antonio, Texas.—Dwelling.—D. J. Woodward is having plans prepared for a \$25,000 residence.

San Antonio, Texas.—Fire Station.—City council has appropriated \$4500 for the completion of the Central Fire Station. Address The Mayor.

Sewell's Point, Va.—Buildings.—Congress has provided an appropriation for six buildings at the Jamestown Exposition, five to be used as government buildings and one for the exhibit of the Negro Development & Exposition Co. of America. J. H. Edwards, assistant secretary of the treasury, and James Knox Taylor, supervising architect, both of Washington, D. C., will visit the exposition grounds for the purpose of selecting site.

Sewell's Point, Va.—Building.—Proposals marked "Proposals for New Jersey Head-

quarters Building, Jamestown Ter-centennial Exposition," and addressed to Lewis T. Bryant, secretary, Commissioners of Quarries and Corrections, Statehouse, Trenton, N. J., will be received until July 17 for all the labor and material necessary for the construction of the State Headquarters Building on the grounds of the Jamestown Ter-centennial Exposition. Plans and specifications on file in the office of C. Brooks Johnston, chairman of the board of governors of the Jamestown Exposition Co., Norfolk, Va. Certified check for \$1000 must accompany each bid. Usual rights reserved.

Shelby, N. C.—Store Building.—S. A. Washburn has purchased site on which to erect store building.

Springfield, Mo.—College Building.—Board of Regents of the State Normal School is considering plans for the erection of building.

Statesville, N. C.—Telephone Exchange.—W. J. Lazenby has contract to erect exchange (mentioned June 21) for the Southern Bell Telephone & Telegraph Co.

Statesville, N. C.—School Building.—Wheeler, Runge & Dickey, Charlotte, N. C., are preparing plans for proposed \$15,000 school building.

Stephenville, Texas.—Cotton Warehouse.—Erath County Warehouse & Cotton Yard Co. has been incorporated with \$5000 capital stock by J. Matt Robinson, Joe Smith, H. F. Meyers and others.

St. Mary's City, Mo.—Building.—Bids will be received until July 20 for construction of hall for St. Mary's Female Seminary. Plans and specifications can be seen at Dudley & Carpenter's, 125 Light street, Baltimore, Md.; N. R. Grimes, 627 F street N. W., Washington, D. C., and at Moore's Hotel, Leonardtown, Md. Certified check for \$300 must accompany each bid. Usual rights reserved. Address Giles F. Dyer of building committee, Leonardtown, Md.

Sykesville, Md.—Buildings.—Bids marked "Proposal for Dining Room and Kitchen" and addressed to the Board of Managers, Springfield State Hospital, will be received until July 19 at the office of Owens & Sisco, architects, 1065 Continental Building, Baltimore, Md. Drawings and specifications may be seen at architects' office. Board reserves usual rights.

Taylor, Texas.—Cotton Warehouse.—T. W. Morse, L. H. Goldstein, S. A. Easley, J. R. Horgis and associates have organized the Farmers' Cotton Warehouse Co. with \$10,000 capital stock to erect cotton warehouse.

Taylorsville, Ky.—School Building.—Town will vote July 21 on a bond issue for the erection of school building. Address Town Clerk.

Timpson, Texas.—Cotton Warehouse.—The Farmers' Union of Shelby county has organized a cotton warehouse company with \$5000 capital stock for the erection of warehouse of 1500 bales capacity.

University, Miss.—Buildings.—Bids will be received until August 7 at the office of J. W. T. Falkner, chairman executive committee, governor's office, Jackson, Miss., for the erection at the University of Mississippi of a science building, an infirmary building and four residences. For plans and specifications apply to R. H. Hunt, architect, Chattanooga, Tenn., or to R. B. Fulton, chancellor, University, Miss.

Washington, Ga.—Church.—Bids will be received until July 31 at office of I. T. Irvin, Jr., for erection of brick edifice for Methodist Church. Certified check for \$100 must accompany each bid. Drawings and specifications on file at office of I. T. Irvin, Jr., and in the office of Geo. C. Thompson, architect, Candler Building, Atlanta, Ga.

Washington, D. C.—Apartment-houses.—Thomas J. Fisher & Co., 114 F street N. W., will erect seven apartment-houses on Morgan street N. W.; two stories and basement; brick with stone trimmings; tin roofing; sanitary plumbing; heating systems. Peter Fersinger, 1 N street N. W.; Piper & Kenyon, 729 15th street N. W., and Burgess & Parsons, 627 F street N. W., are estimating on construction. Bids to be in July 18. Appleton P. Clark, Jr., architect, 605 F street N. W.

Washington, D. C.—Apartment-house.—John L. Warren, 416 5th street N. W., has awarded contract to Timothy L. Lewis, 51 U street N. W., for the construction of apartment-house at 1939 17th street N. W.; four stories, 44x52 feet; brick with Indiana limestone trimmings; slag roof; electric wiring and fixtures; sanitary plumbing; steam-heating system; cost about \$20,000. Hunter & Bell, architects, 1010 F street N. W.

Washington, D. C.—Dwelling.—Frank P. Reeside, 1003 F street N. W., has awarded contract to John H. Nolan, 1413 G street N. W., for the construction of dwelling at 2128 Bancroft Place N. W.; three stories and basement, 25x35.9 feet; brick with stone trimmings; tin roof; electric wiring and fixtures; sanitary plumbing; hot-water heating system; cost about \$15,000. Frederick B. Pyle, architect, 1003 F street N. W.

Washington, D. C.—Dwelling.—S. W. Woodward of Woodward & Lothrop, 11th and F streets N. W., has awarded contract to Samuel H. Edmondson, 611 G street N. W., for the construction of dwelling at 1834 Connecticut avenue N. W.; three stories, 25x30.2 feet; brick with stone trimmings; tin roof; electric wiring and fixtures; sanitary plumbing; hot-water heating system; cost about \$12,000. Frederick B. Pyle, architect, 1003 F street N. W.

Washington, D. C.—Dwelling.—Orrin G. Staples, Riggs House, 15th and G streets N. W., will erect dwelling at 1234 16th street N. W.; four stories and basement, 41x75 feet; brick with Indiana limestone trimmings; structural iron and steel; tin and tile roofing; galvanized-iron cornice and skylight; tiling and mosaic work; metal ceilings; electric wiring; sanitary plumbing. Lighting fixtures and heating system not in contract. John McGregor, 729 12th street N. W.; John H. Nolan, 1413 G street N. W.; Arthur Cow-sill, Colorado Building, 14th and G streets N. W., and Fissell & Wagner, Home Life Building, 15th and G streets N. W., are estimating on the construction. Speiden & Speiden, architects, 705 G street N. W. Bids to be in about July 16.

Washington, D. C.—Dwellings.—Pumphrey & Palmer, builders, 414 7th street S. W., will erect three two-story brick dwellings with hot-air heating systems at 1326-1330 Massachusetts avenue S. E., to cost about \$10,000. Edward O. Volland, architect, 418 L street N. W.

Washington, D. C.—Dwellings.—Bates and John L. Warren, 416 5th street N. W., have awarded contract to Timothy L. Lewis, 51 U street N. W., for the construction of six two-story brick dwellings at 600-610 Fairmount street, to cost about \$14,000. Hunter & Bell, architects, 1010 F street N. W.

Washington, D. C.—Dwellings.—Thomas H. Pickford, 1410 G street N. W., has awarded contract to Jennings & Scott, 220 Corcoran Building, 15th and F streets N. W., for the construction of six two-story brick dwellings, with hot-air heating systems, at 5400-5410 9th street N. W., to cost about \$15,000.

Washington, D. C.—Dwellings.—Middaugh & Shannon, builders, 2405 1st street N. W., will erect six two-story brick dwellings, with hot-air heating systems, at 3530-3540 Warder street, to cost about \$18,000. Joseph Bohn, Jr., architect, 215 D street N. W.

Washington, D. C.—Office Building.—Referring to addition to be erected to office building of the Washington Savings Bank, C. H. Davidge, treasurer, 12th and G streets N. W., the following contractors are estimating on the work: W. L. Turner, 41 G street N. W.; Arthur Cow-sill, Colorado Building, 14th and G streets N. W.; Richardson & Burgess, Colorado Building; James L. Marshall, 1321 G street N. W.; W. S. Spencer, 930 F street N. W.; Charles A. Langley, 310 12th street N. W.; W. E. Spel Company, 1342 New York avenue N. W., and John H. Nolan, 1413 G street N. W.; six stories and basement, 33x67 feet; brick with stone trimmings; steel-frame fireproof construction; slag roof; electric wiring and fixtures; sanitary plumbing; steam-heating system; elevator. Bids to be in July 14. B. Frank Meyers, architect, Bond Building, 14th street and New York avenue N. W.

Washington, D. C.—Stable.—The Standard Oil Co., Washington Loan & Trust Building, 9th and F streets N. W., will erect stable on 1st near South Capitol street; two stories, 32x137 feet; brick with stone trimmings; tin roof; electric wiring and fixtures; elevator; cost about \$9000.

Washington, D. C.—Store Building.—S. M. Burt has awarded contract to Samuel H. Maddox, 428 8th street S. E., for remodeling store building at 1409 G street N. W.; tile floors, marble wallcovering and electric wiring and fixtures will be installed.

Washington, D. C.—Store Building.—R. E. Burks, 729 7th street N. W., has commissioned Oscar G. Vogt, architect, Corcoran Building, 15th and F streets N. W., to prepare plans and specifications for store building to be erected at corner 7th and M streets N. W.; three stories and basement, 25x116 feet; brick with terra-cotta trimmings; structural iron and steel; slag roof; electric wiring and fixtures; sanitary plumbing; steam-heating system; freight elevator.

Washington, D. C.—Synagogue.—The Talmud Torah Hebrew Congregation has awarded contract to Harman A. Parquette, 1219 33d street N. W., for the construction of synagogue at 467 E street S. W.; one story, 33x90 feet; brick with stone trimmings; structural iron and steel; tin roof; cost about \$12,000. Wm. L. Webster, architect.

Waycross, Ga.—School Building.—City has voted the \$25,000 bond issue mentioned June 21 for the erection of school building. Address The Mayor.

Wilmington, N. C.—Rectory.—Plans by Cooper & Davis have been adopted for proposed \$12,000 rectory for St. James' Church, R. W. Hogue, pastor.

RAILROAD CONSTRUCTION.

Railways.

Albany, Ga.—An officer of the Central of Georgia Railway writes from Savannah to the Manufacturers' Record that at present only a preliminary survey is being made for the line from Albany to Apalachicola, Fla. C. K. Lawrence is chief engineer, with headquarters at Savannah.

Augusta, Ga.—A charter has been granted for the Georgia & Florida Railway, in which John Skelton Williams of Richmond and others are interested as heretofore reported. Line is from Augusta to Valdosta and the Gulf of Mexico, 315 miles.

Baxter, Tenn.—President J. B. Gentry of the Baxter & Gainesboro Electric Railroad & Power Co. informs the Manufacturers' Record that the county court on July 2 decided adversely (by vote of 18 to 9) on the proposition that Jackson county contribute \$50,000 toward the water-power development and the construction of the railroad. The project will lay over until the court meets again in October. An engineer has not yet been employed. Directors are J. B. Gentry, president; R. B. Gentry, treasurer, Baxter, Tenn.; W. H. Johnston, secretary, Silver Point, Tenn.; J. C. Gentry and R. R. Gentry, Baxter, Tenn. Line to be about 18 miles long.

Bennettsville, S. C.—The Marlboro & Deep-water Railroad Co. has been chartered to build a line 12 miles long; capital \$25,000. The incorporators are J. J. Matheson, president; G. D. Matheson, vice-president, and C. R. May, secretary and treasurer.

Birmingham, Ala.—An officer of the Tide-water Development Co. is reported as saying that contracts for building the electric line will be let in November. It will run from Gadsden, Ala., southwest via Asheville, St. Clair Springs, Springville, Huffman, East Lake, Woodlawn, Avondale, Birmingham, Thomas, Pratt City, Ensley, Bessemer, Brookwood and Holt to Tuscaloosa, about 125 miles. Steamers will be operated from Tuscaloosa to Mobile on the Warrior, Tombigbee, Alabama and Mobile rivers.

Bryan, Texas.—Reported that Edward Kennedy of Houston will build the proposed electric railway from Bryan to College Station, five and one-half miles. About \$20,000 has been subscribed to the capital stock and \$5000 is yet to be raised.

Bunkle, La.—H. P. Moberly, chief engineer of the Louisiana East & West Railway, is reported as saying that contracts have been let to the following parties: B. Dickinson of New Orleans, 10 miles; Carney, McFarlin & Andrews, 10 miles; M. Tansey, Alexandria, La., 16 miles. The line is to run from Bunkle to Ville Platte and Eunice, La. About 75 per cent. of grading is done and six miles of track laid.

Cairo, W. Va.—Raymond Kerr has been appointed to survey for the extension of the Cairo & Kanawha Valley Railway from Cairo to Smithville on Hughes river.

Cape Charles, Va.—Mr. J. G. Rodgers, superintendent of the New York, Philadelphia & Norfolk Railroad Co., writes the Manufacturers' Record as follows: "We are not double-tracking our entire line, nor do we intend to do so in the immediate future." This denies a recent press report.

Carrabelle, Fla.—The Georgia, Florida & Alabama Railway Co. will, it is reported, make extensive improvements to its Gulf terminals at Carrabelle. J. P. Williams of Savannah is president at Savannah, Ga.

Carthage, N. C.—The Carthage & Pinehurst Railway Co. has been chartered to build a line from Carthage to Pinehurst, N. C., 12 miles; capital \$50,000. The directors are H. A. Page, J. R. Page of Aberdeen, T. B. Tyson, D. A. McDonald, J. L. Currie and J. F. Cole of Carthage.

Chatham, Va.—John A. Harman & Co. are reported to be pushing work on the grading for the change of line on the Southern Railway near Galveston Station.

Cheyenne, O. T.—Mr. R. V. Converse, secretary of the Clinton, Cheyenne & Canadian Interurban Railroad Co., informs the Manufacturers' Record that the proposed line is from Clinton, O. T., to Canadian, Texas, 150 miles, with a branch from Cheyenne to Mangum, O. T., 70 miles. Bids for preliminary survey and estimates will be received immediately. President is C. S. Glickerson; vice-president, L. L. Collins; secretary and treasurer, R. V. Converse. The other directors are W. T. Bonner and L. W. Pate.

Chicora, S. C.—The Berkley Railroad will, it is reported, be sold at auction July 23. The line is nine miles long, from Chicora to Monch's Corner. An extension may be built. P. R. Rivers is receiver at Charleston, S. C.

Dothan, Ala.—Mr. P. J. Domer, superintendent of the Atlanta & St. Andrews Bay Railway, is quoted as saying that track is laid for 25 miles from Dothan to beyond Camelon, and that grading is completed to Cottondale, Fla., 32 miles. The line will be continued from Cottondale to St. Andrews Bay, Fla., 55 miles.

Fort McCay, Fla.—Reported that the Rentz Lumber Co. of Silver Springs will complete its railroad to Fort McCay.

Fort Smith, Ark.—The city council has granted a franchise for an electric railway to Wharton Carnall and S. A. Williams, the building of which will be the first construction for the proposed electric railway to connect Fort Smith with various coal-mining towns in the western part of Arkansas.

Frederick, Md.—The Frederick & Thurmont Railway Co. will, it is reported, make the final survey and estimates at once, financial arrangements having been completed to build the line, 15 miles long. D. Columbus Kemp is president.

Frederick, Md.—Mr. J. Roger McSherry, vice-president of the Frederick & Middletown Railroad Co., writes the Manufacturers' Record that the Jefferson & Braddock Heights Railway Co., of which he is an incorporator, proposes to build from Jefferson to Braddock Heights, Md., five miles, connecting there with the Frederick & Middletown Railroad. Westinghouse, Church, Kerr & Co. of New York are doing the engineering.

Frederick, Md.—The Jefferson & Braddock Heights Railway Co. has been incorporated to build a line to connect the two points named in the title. The incorporators are J. Roger McSherry, James E. Ingram, Frank H. Callaway, Robert P. Graham, Thomas H. Haller, Emory L. Coblenz and Richard P. Ross. They are directors of the Frederick & Middletown Electric Railroad Co.

Front Royal, Va.—The name of the proposed railway is the Front Royal, Rappahannock & Tidewater Railroad, which proposes to build via Chester's Gap and Washington to Sperryville, 23 or 25 miles. Survey is not yet made. Hugh E. Naylor, secretary Board of Trade, can probably give information.

Frostburg, Md.—The Baltimore & Ohio Railroad Co. is reported to be surveying for a cut-off from Sand Patch, on the Pittsburg division, via Frostburg to the Pinto tunnel and cut-off. D. D. Carothers is chief engineer at Baltimore.

Georgetown, Texas.—Reported that a charter is being prepared for a new railroad from Georgetown to Fort Worth, Texas, about 150 miles, via Florence, Killeen, Gatesville, Jonesboro, Iredell and Glen Rose. The names of the incorporators are not yet stated.

Houston, Texas.—Grading has begun on the Houston Belt & Terminal Railway, the contract for eight miles being let to Johnson Bros. & Read.

Jackson, Miss.—Messrs. McWille & Thompson write the Manufacturers' Record confirming the report that the Pearl River Valley Railroad Co. has been organized, and saying that no time has been fixed to open bids for construction nor has a permanent selection been made of a chief engineer. The address of Mr. Fred Herrick, chief promoter of the company, is Lac du Flambeau, Wis.

Jacksonville, Fla.—Reported that the Atlantic Coast Line will soon begin the extension of its export terminal tracks. E. B. Pleasants is chief engineer at Wilmington, N. C. It is also reported that the Seaboard Air Line will build a river belt road. W. L. Seddon is chief engineer at Portsmouth, Va.

Kansas City, Mo.—Reported that a company is being organized to build an electric railway from Kansas City to Belton, Mo., about 22 miles. Among those interested are W. S. Cowherd, Webster Withers, Jr., Walter J. Bales and Dr. W. E. Minor.

Kansas City, Mo.—The Kansas City, St. Joseph & Excelsior Springs Railway Co. proposes to build from Kansas City to St. Joseph, Mo., 50 miles, with a branch of 24 miles to Excelsior Springs. A cut-off of about 28 miles is also to be built from a point on the main line to Excelsior Springs to reduce the distance between that point and St. Joseph. Joseph J. Helm is president; James F. Halpin, vice-president, and Waddell & Hedrick are the engineers, all at Kansas City.

Lehigh, I. T.—H. G. Finch, division engineer in charge, is reported as saying that 16 miles of track are laid on the Oklahoma Central Railway from Lehigh to a point near

Tupelo, I. T. The line is going west to Chickasha, 131 miles from Lehigh, and an extension of 85 miles is proposed from Lehigh to Paris, Texas.

Macon, Ga.—The Central Railway of Georgia has closed a deal for the land purchased from the city, which will be used for enlarging the railroad yards. T. S. Molise is general manager at Savannah, Ga.

Madisonville, Ky.—Walton, Wilson, Rodas & Co. of Knoxville propose to sublet 56 miles of work on the Madisonville, Hartford & Eastern Railway, which is a Louisville & Nashville plan. George W. Fengin is chief engineer at Hartford, Ky.

Madisonville, Texas.—Messrs. Sparks and Farmer are conferring with people at Menardville, Madisonville and other points concerning a proposed railroad from Colorado, on the Texas & Pacific Railway in Mitchell county, Texas, to the Gulf, nearly 400 miles. Other places which would be reached by the line are Bronte, Robert Lee, Miles Station and Runnels.

Marion, N. C.—Reported that the South & Western Railway will shortly award the construction contract for the further extension of its line from Marion to Rutherfordton, N. C. M. J. Caples is general manager and chief engineer at Bristol, Tenn.

McComb, Miss.—J. Turner Burke, engineer of construction, writes the Manufacturers' Record that the route has not been decided for the Natchez extension of the Liberty-White Railroad to points west of Liberty. It may go to either Gloster or Roxie, both being on the Yazoo & Mississippi Valley Railroad. Surveys are not yet completed. The extension to Columbia will be completed and in operation to Holmesville, Miss., 10 miles from McComb, by August 1.

Mena, Ark.—J. F. Holden of the Midland Valley Railroad is quoted as denying the press report that the company would build an extension through Texarkana.

Millry, Ala.—The Tombigbee Valley Railway will let contract to build 15 miles of railroad extension from Healing Springs, Ala., north. F. J. Parrigan is chief engineer at Millry, Ala., and John T. Cochran is president, Room 510, City Bank Building, Mobile, Ala.

Mobile, Ala.—The Mobile & West Alabama Railroad Co., which proposes to build a line from Florence, Ala., to Mobile, Ala., with a branch from Tuscaloosa to Birmingham, has elected a new board of directors as follows: George J. Stegmain, M. J. Murry, John F. McLaughlin, E. J. Lynett, M. J. Martin, L. A. May, M. E. McDonald, H. Austill, F. G. Blair, M. G. Winn and J. A. Montgomery. Messrs. McDonald and May are also interested as incorporators in the Mineral Belt Railway and the Wayne Railway, recently incorporated to build a line about 40 miles long from Florence, Ala., to Mannie, Tenn.

Nashville, Tenn.—Thomas M. Steger of Nashville, representing the Nashville & Huntsville Railroad, has, it is reported, issued a circular-letter providing that each county through which the line will run will be represented by a director, making a board of five members. The route is from Nashville southward via or near Nolensville, Trilene, Eagleville, Lewisburg and Elkton to Huntsville, Ala. Subscriptions amounting to \$50,000 are, it is reported, being solicited along the line. T. W. Pratt of Nashville and C. C. Dahney of Lewisburg, Tenn., are also interested. I. L. McCord represents the American Construction Co. of New York, which, it is said, only awaits the subscriptions to deposit its money and start work.

Newkirk, O. T.—A charter has been issued to the Newkirk, Tonkaway & Southern Electric Railway Co. of Oklahoma City; capital \$1,500,000. The proposed line is from Newkirk via Peckham, Blackwell, Billings, Perry, Orlando, Mulhall, Guthrie and Edmunds to Oklahoma City. M. P. Brown, J. S. Kerfoot and H. E. Warfield of New York are the incorporators.

New Orleans, La.—Surveys are reported complete for the proposed line of the New Orleans & Baton Rouge Railway Co., which is being promoted by W. Osgood Orton, recently of Chicago. Construction may begin in the fall.

Oklahoma City, O. T.—Reported that contract has been let to the Kenefick Construction Co. of Kansas City to build a branch of the Frisco system from Oklahoma City to Hewitt, O. T.

Orlando, Fla.—Preliminary survey is reported complete for the proposed branch of the Seaboard Air Line Railroad from Orlando to the east coast.

Paris, Ky.—The Paris & Mt. Sterling Railway Co. proposes to let construction contract as soon as location is finished and capital assured. Line will run from Paris to North Middletown and Mt. Sterling, Ky., 23 miles.

John T. Collins is president at North Middletown, Ky.

Pound, Va.—Reported that the Indian Creek & Pound River Railroad is being extended to the Cumberland mountain to handle the output of the Tidewater Lumber Co.

Roanoke, Va.—President L. E. Johnson of the Norfolk & Western Railway writes the Manufacturers' Record that the proposed Interior & West Virginia Railroad and the Virginia & Potts Creek Railroad will be an extension of the Big Stony Railway. Length of the two lines will be about 23 miles through a mountainous country. No bids have been asked for construction and no equipment will be purchased. Mr. C. S. Churchill is engineer in charge.

Roanoke, Va.—The Virginia & Potts Creek Railroad Co. has been incorporated to build a line 11 miles long from Potts Creek, on the West Virginia boundary, to Botto Creek P. O., in Craig county, Virginia. L. E. Johnson, president of the Norfolk & Western Railway, is also president of the new line. E. H. Allen is secretary and Joseph P. Lacy is treasurer. Presumably this will be a continuation into Virginia of the Interior & West Virginia Railroad, just incorporated by the Norfolk & Western officers in West Virginia.

San Antonio, Texas.—H. M. Aubrey of Aubrey & King, attorneys, reported as being interested in a proposed electric railway from San Antonio to Austin, is quoted as saying: "In my capacity as chairman of the transportation committee of the Business Men's Club of San Antonio I have recently had a visit from parties who are engaged in promoting an electric railroad from Austin to Lockhart, to be extended conditionally to San Antonio. I was assured that the deal had been finished and all the money necessary was on hand; also that the extension to San Antonio would depend upon co-operation by property-owners in and between San Antonio and Lockhart." Ralph W. Carroll, 40 Wall street, New York, is reported to be prominent in the plans.

Sergeant, Ky.—The Barcus Lumber Co. will, it is reported, extend its narrow-gauge railroad to the headwaters of Shelby creek for the purpose of timber development.

St. Louis, Mo.—E. F. Mitchell, engineer of construction Missouri Pacific Railway, is quoted as saying that during the last six months track has been laid as follows: From Eudora, Ark., about two and one-half miles towards Gilbert, La.; on the Gordon & Fort Smith branch, about five miles. No track yet laid on the Gordon & Fort Smith Northern or the Springfield Southwestern.

St. Louis, Mo.—The Hillsboro, Kimmswick & Northern Railroad Co. has been incorporated at Jefferson City to build a line from Jefferson Barracks to Monte Sano Park, in which Henry F. Vogel is interested; capital \$300,000. The incorporators are H. W. Gutke, A. F. Furrer, L. A. Hall, Charles A. Gutke and James J. Ring. Line to run from the southern city limits of St. Louis to Hillsboro, Mo., 23 miles.

Summerville, S. C.—Harley Graham has begun construction for the Charleston & Summerville Electric Railway near Summerville with a small force, but it is said that active building of the line will not begin immediately. Gen. A. J. Warner of Gainesville, Ga., and others are interested.

Talladega, Ala.—Reported that the Seaboard Air Line, which proposes to build a branch from Oatchale to Anniston, Ala., will continue the same to Talladega, and possibly to Montgomery. W. L. Seddon is chief engineer at Portsmouth, Va.

Tampa, Fla.—Mr. Peter O. Knight, attorney, writes the Manufacturers' Record confirming the report that the Plant City, Arcadia & Gulf Railway has been purchased and will be reorganized July 17. The present owners intend to extend the main line southward immediately.

Thomasville, N. C.—M. L. Jones, president of the Thomasville & Glen Anna Railroad, is quoted as saying that the line has been extended from Cid to Denton, N. C., six miles.

Town Creek, Brunswick County, North Carolina.—Reported that the Town Creek Railroad & Lumber Co. will extend its line 10 miles to Wilmington. R. F. Devane, W. H. Whitehead and L. O. Parish are said to be interested.

Van Buren, Ark.—Reported that Mr. E. B. Miller of Fort Smith is promoting a railroad from Van Buren to Stilwell on the Kansas City Southern Railroad.

Velasco, Texas.—The Velasco, Brazos & Northern Railway, 20 miles long, has been purchased at receiver's sale by President C. H. Alexander of Dallas, and it is understood that an extension is proposed along Oyster creek.

Waco, Texas.—Reported that the Texas Midland Railroad is surveying for an extension from Ennis to Waco. E. H. R. Green is president at Terrell, Texas.

Street Railways.

Chattanooga, Tenn.—C. E. James has applied to the city council for a franchise to build a new electric railway in Chattanooga, including leading streets on the west side, and new lines to Chickamauga Park and Lookout Mountain.

Chattanooga, Tenn.—The Chattanooga Railways Co. has filed a mortgage to secure \$3,000,000 of 5 per cent. bonds, of which \$1,375,000 will be used immediately for betterments and additions. Mr. D. J. Duncan, general manager, is quoted as saying that the company will practically rebuild all of its lines.

Corpus Christi, Texas.—The proposed railway from Corpus Christi to the Alta Vista Hotel will be four miles long. Randolph Robertson of Corpus Christi and others are interested.

Lynchburg, Va.—The common council has adopted an ordinance granting a franchise for an extension to the Lynchburg Traction & Light Co.

Washington, D. C.—The Great Falls & Old Dominion Railway Co. has completed its line to Great Falls, and has run the first car over it.

Winston-Salem, N. C.—The Winston-Salem South Bound Railway Co., represented by E. B. Jones, has been granted a franchise to build and operate a street railway in Winston-Salem. J. Lindsay Patterson and others are interested.

MACHINERY, PROPOSALS AND SUPPLIES WANTED.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The Manufacturers' Record has received during the week the following particulars as to machinery that is wanted.

Alcohol Machinery.—Manufacturers' Machinery Co., Harry K. Ivens, vice-president, 738 Poydras street, New Orleans, La., wants addresses of manufacturers of machinery for making alcohol; also information relative to the manufacture of denatured alcohol, as well as to its uses under the new rules of Congress which remove the tax.

Approaches.—James Knox Taylor, supervising architect, Treasury Department, Washington, D. C., will open bids August 14 for changes in approaches at United States postoffice at Henderson, Ky., in accordance with specifications, copies of which may be had at office of supervising architect, or at office of custodian at Henderson, at the discretion of architect.

Bleaching Apparatus.—Southern Aseptic Laboratories, Columbia, S. C., wants electric bleaching apparatus, also bleaching material, motors, etc.

Boiler.—See "Water-works Equipment, etc."

Boilers.—Southern Aseptic Laboratories, Columbia, S. C., wants a second-hand 50-horse-power horizontal boiler.

Boilers.—See "Electric-light Plant."

Boilers.—Camden Water, Light & Ice Co., Camden, S. C., wants to purchase boilers.

Bottles.—Rock Cliff Lithia Springs Co., Spartanburg, S. C., wants bottles.

Bottling Machinery.—Rock Cliff Lithia Springs Co., Spartanburg, S. C., wants bottling machinery.

Brick Machinery.—C. S. Kingsmore, Box 274, Sumter, S. C., wants addresses of manufacturers of brick machinery.

Brick Machinery.—G. H. Murphy, Argyle, Fla., wants brick machinery.

Building Materials.—St. Louis Frog & Switch Co., 1318-22 Chemical Building, St. Louis, Mo., wants building materials.

Building Materials.—Citizens' Bank & Trust Co., Middlesboro, Ky., wants bids on plate glass.

Cannery Equipment.—L. Robltzsch, Fitzgerald, Ga., wants addresses of manufacturers of equipment for fruit and vegetable cannery.

Cast-Iron Covers.—Bids will be received until July 25 at the office of Henry B. F. Macfarland, Henry L. West, John Biddle,

commissioners District of Columbia, Washington, D. C., for cast-iron covers for water-meter boxes. Forms, specifications and necessary information may be obtained at Room 43, District Building, Washington, D. C.

Clay-working Machinery.—See "Gypsum Plants."

Conveying Machinery.—J. Lee Hale, Fort and Cravens streets, Chattanooga, Tenn., wants conveyor. (See "Crushing Plant.")

Cleaning Machinery.—See "Teanut Machinery."

Conduits.—See "Sewerage and Conduits."

Cotton Compress.—C. T. O'Ferrall, Jr., wants addresses of manufacturers of equipment for small cotton compress.

Crane.—Postoffice Box 252, Atlanta, Ga., wants to purchase a jib crane suitable for very severe work; mast should be not less than 25 feet in height nor over 28 feet; jib to be 30 feet, giving crane a radius of 60 feet. Either belt power, hydraulic or electric type will answer. Give price and best delivery either new or second-hand.

Cresosoting Cylinder Cage.—Galveston Cresosoting Co., Galveston, Texas, wants about six cylinder cages.

Crushing Plant.—J. Lee Hale, Fort and Cravens streets, Chattanooga, Tenn., wants prices on crusher, engine and boiler and conveyor; new or second-hand; capacity 60 to 100 yards; mounted machinery only.

Desks.—C. B. Thornburgh, Southside, Tenn., wants single desks for school.

Electrical Equipment.—C. C. & H. Mining & Milling Co., Webb City, Mo., wants a 100 32-candle-power electric-light dynamo and equipment.

Electrical Equipment.—J. R. Dobyns, superintendent Institution for Deaf, Jackson, Miss., wants prices on 10 motors from 1½ to 10 horse-power, 1200 to 1800 R. P. M.

Electrical Equipment.—See "Water-works Equipment, etc."

Electrical Equipment.—Broslus-Montz Manufacturing Co., 336 Baronne street, New Orleans, La., wants electrical equipment for power and light.

Electrical Equipment.—Barclay-Bessonet Company, Temple, Texas, wants a combined exhaust fan and electric motor. (See "Exhaust Fan.")

Electrical Equipment.—Southern Aseptic Laboratories, Columbia, S. C., wants motors. (See "Bleaching Apparatus.")

Electric-light Plant.—Paul Gilreath, mayor, Cartersville, Ga., will receive bids until July 23 for furnishing material and constructing a complete electric-light plant. Bids will be received on a 200-kilowatt alternator and electrical equipment, both belted and direct connected; a 200-horse-power Corliss or four-valve engine, both belted and direct connected; meters, transformers, arc lamps, two 150-horse-power boilers, heater feed pumps, etc. Specifications will be on file and can be procured from the mayor after July 11; J. B. McCrary, engineer, Empire Building, Atlanta, Ga.

Electric Machinery.—Joseph M. Roman & Co., 1013 Century Building, Atlanta, Ga., want catalogues of electric machinery and apparatus.

Elevator.—Citizens' Bank & Trust Co., Middlesboro, Ky., wants bids on elevators.

Elevators.—Standard Warehouse Co., Americus, Ga., will want about October or November two or possibly three ordinary freight elevators for service between basement and ground floor.

Elevator.—James Knox Taylor, supervising architect, Treasury Department, Washington, D. C., will receive bids until July 25 for the installation of a hydraulic freight lift, etc., in the United States postoffice building at Durham, N. C., in accordance with drawings and specifications, copies of which may be obtained on application at the discretion of the supervising architect.

Engine.—See "Electric-light Plant."

Engine.—See "Water-works Equipment, etc."

Engine.—James Lumber Co., Durham, N. C., wants a new or second-hand 25 to 35-horse-power gasoline engine.

Engine.—See "Road Machinery."

Engine.—C. C. & H. Mining & Milling Co., Webb City, Mo., wants one 150-horse-power gas engine.

Engine and Boiler.—J. Lee Hale, Fort and Cravens streets, Chattanooga, Tenn., wants engine and boiler. (See "Crushing Plant.")

Exhaust Fan.—Barclay-Bessonet Company, Temple, Texas, wants a combined exhaust fan and electric motor. (See "Electrical Equipment.")

Felting Machines.—See "Garnet Machines."

Fireplace Fixtures.—Southern Specialty Co., Pinebluff, N. C., wants addresses of

manufacturers of grates, grate rims, tiling and all kinds of fireplace fixtures.

Fire-protection Apparatus.—Standard Warehouse Co., Americus, Ga., will want about October or November sprinkler supplies, tank, etc., for warehouse.

Fire-protection Apparatus.—Louisville Manufacturing Co., Louisville, Ga., wants an automatic fire-sprinkler system.

Foundry Equipment.—Brosius-Montz Manufacturing Co., 336 Baronne street, New Orleans, La., wants foundry equipment.

Foundry Equipment.—North Texas Foundry & Machine Co., Paris, Texas, wants second-hand hydraulic wheel press, 100 tons.

Fuller's-earth Machinery.—F. W. McGuire, Brenham, Texas, wants addresses of manufacturers of machinery for manufacturing fuller's earth.

Furniture Factory.—Henry W. Collins, Enfield, N. C., wants information as to cost of building, equipping and operating a furniture factory of small or medium capacity.

Furniture.—See "School Furniture" and "Desks."

Garnet Machines.—Laurinburg Oil Co., Jas. A. Jones, president and treasurer, Laurinburg, N. C., wants lint felting machines to handle 1200 pounds lint daily; to felt linters and make it into mattresses.

Gauge Cocks.—Shand Builders' Supply Co., 615 Main street, Columbia, S. C., wants addresses of manufacturers of ball and lever gauge cocks.

Grading.—H. B. Macfarland, H. L. West, John Biddle, commissioners of the District of Columbia, Washington, D. C., will receive bids until July 14 for grading and regulating suburban streets and avenues; also at the same time for grading certain streets and avenues, aggregating about 30,000 yards of grading. Blank forms of proposal, specifications and all necessary information on both contracts will be furnished on application.

Gypsum Plants.—Rafael Quevedo, 3 Conde Xiquena street, Madrid, Spain, wants information regarding gypsum plants—plans of installation, specifications, estimates on cost of machinery, etc.

Heating Apparatus.—Citizens' Bank & Trust Co., Middleshoro, Ky., wants bids on steam-heating apparatus.

Heating Apparatus.—C. B. Thornburgh, Southside, Tenn., wants heating apparatus for two-story school building (hot air, steam or hot water).

Heating Plant.—Arch. Faidley, secretary building commission, St. Elmo, Chattanooga, Tenn., will receive bids until July 18 for a heating plant for school building at St. Elmo. Plans of building and specifications for heating can be had at the office of G. Q. Adams, architect, Chamberlain Building, Chattanooga, Tenn.

Hoisting Equipment.—Frank Wright, Cave Springs, Ga., wants a second-hand small hoisting crab or winch.

Hoisting Equipment.—Janney & Co., Montgomery, Ala., want addresses of manufacturers of hoisting engines. They want a traveling machine to break up heavy cast scrap iron capable of lifting from 800 to 1500-pound drop hammer to a height of about 40 feet, the drop to swing around like a steam shovel.

Horseshoe Machinery.—A. B. C., care Manufacturers' Record, Baltimore, Md., wants machinery for a moderate-sized horseshoe plant.

Hydraulic Machinery.—Joseph M. Roman & Co., 1013 Century Building, Atlanta, Ga., want catalogues of hydraulic machinery.

Ice Machinery.—T. A. Crews & Co., Walkertown, N. C., want small ice plant.

Iron and Steel.—Brosius-Montz Manufacturing Co., 336 Baronne street, New Orleans, La., wants pig-iron and steel.

Ironworking Machinery.—See "Horseshoe Machinery."

Levee Work.—G. Waterman, chairman Linwood and Auburn Levee Board, Dumas, Ark., will receive bids until July 25 for 200,000 cubic yards, more or less, for enlargement work of levee in Lincoln county, Arkansas. Plans and specifications can be had from George De Beughem, Randolph Building, Memphis, Tenn., chief engineer in charge. Board reserves usual rights. Contract to be let at Varner, Ark., Thursday, July 26. Work to be paid for by interest-bearing certificates of the board.

Loading Machinery.—W. A. Little, 860 Orange street, Macon, Ga., wants a machine for loading sand in coal cars; capacity for handling from 400 to 600 tons daily.

Lighting Fixtures.—C. B. Thornburgh, Southside, Tenn., wants lighting fixtures for school building.

Machine Tools.—Brosius-Montz Manufacturing Co., 336 Baronne street, New Orleans, La., wants drill presses, lathes, tools.

Machine Tools.—See "Foundry Equipment."

Machine Tools.—St. Louis Frog & Switch Co., 1318-22 Chemical Building, St. Louis, Mo., wants tools for the manufacture of frogs, switches, crossings and all types of track appliances for steam and street railways.

Metal-working Machinery.—See "Steel-ball Machinery."

Mill and Mine Supplies.—W. B. Osborn Machinery Co., Clarksburg, W. Va., is in the market for mill and mine supplies; dealers' prices.

Mining Machinery.—See "Fuller's-earth Machinery."

Paving.—Chas. Maurin, mayor, Donaldsonville, La., will open bids July 25 for paving Mississippi street and Railroad avenue, requiring approximately 20,000 yards of pavement. Bids will be received on the following classes of pavement: Vitrified brick or block, sheet or rock asphalt, bitulithic; all to be laid on concrete base with curb and gutter. Full specifications and information can be obtained at the office of William Mackintosh, engineer. A deposit of \$500 must accompany each bid. Usual rights reserved.

Paving.—Bids will be received until July 23 at office of W. D. Abbott, recorder, Tulsa, I. T., for paving with brick 10,000 square yards, including approximately 3000 yards of excavating. Certified check for \$300 must accompany each bid. Plans and specifications may be seen at office of city engineer, City Hall, Tulsa, I. T. Usual rights reserved.

Paving.—H. B. F. Macfarland, Henry L. West, John Biddle, Commissioners District of Columbia, Washington, D. C., will receive bids until July 20 for paving various streets and avenues with sheet asphalt; also at same time and place for laying asphalt-block pavements. Blank forms of proposal, specifications and all necessary information may be obtained on application.

Pecan-nut Machinery.—Barclay-Bessonette Company, Temple, Texas, wants machinery for assorting pecans.

Piping.—See "Water-works Equipment, etc."

Plaster Machinery.—A. P. Stout, Montgomery, Ala., wants addresses of manufacturers of machinery for making fiber or pulp plaster.

Plumbing Supplies.—See "Gauge Cocks."

Pulleys.—Peacock's Iron Works, Selma, Ala., wants good second-hand whole cast-iron pulleys from 12 inches diameter to 36 inches diameter, inclusive, with from 6 to 12-inch face, and bore from 1 1/2 to 3 inches.

Pumps.—See "Electric-light Plant."

Pumps.—See "Water-works Equipment, etc."

Railway Equipment.—Berkley Limestone Co., S. W. Shoop, superintendent, Martinsburg, W. Va., wants 2500 feet of 40-pound relaying rails with splices, etc.

Railway Equipment.—D. W. Alderman & Sons Company, Alcolu, S. C., wants five miles of 50-pounds-to-the-yard steel relay rails.

Road Building.—Montgomery County Commissioners, Rockville, Md., will receive bids until July 24 for improving public highway between Sligo branch and Four Corner's road, to include grading and macadamizing one mile; also at same time and place for improving public highway between 7th street and Sligo branch, to include grading and macadamizing of about one mile. Roads to be built under State supervision, according to plans and specifications on file at office of county commissioners, Rockville, Md. All proposals must be made on regular forms furnished by State Geological Survey Commission, to be obtained through office of commissioners. Bids otherwise made out will not be received. Certified check for \$200 must accompany each bid for work as above stated. Usual rights reserved.

Road Machinery.—Bibb County Road Commissioners, Macon, Ga., will want a road crusher, engine and road sprinkler. Address Ben L. Jones, Macon, Ga.

Roofing.—C. B. Thornburgh, Southside, Tenn., wants roofing.

Scales.—Barclay-Bessonette Company, Temple, Texas, wants platform and floor scales.

School Furniture.—South Mississippi College, W. I. Thames, president, Hattiesburg, Miss., will want to purchase school furniture and considerable hall seating.

Screen-door Machinery.—R. A. Pretlow, Franklin, Va., wants addresses of manufacturers of machinery for making screen doors and windows.

Seating.—See "School Furniture."

Sewerage and Conduits.—Bids will be received until July 16 at office of Andrew J. O'Reilly, president board of public improvements, St. Louis, Mo., for furnishing materials, tools and labor to construct sewer in Gravois Park and connect same to buildings; deposit required \$50; for furnishing

all materials, tools and labor necessary for construction of sewer and certain branches thereto and reconstructing other branches, and for constructing a conduit for electric-light wires, all in grounds of city poorhouse. Estimated quantities as follows: Constructing main sewer (estimated 708 lineal feet), all conduits (estimated 700 lineal feet) and all manholes (7) complete, total amount; relaying old sewer branches, 6 inches, 200 feet; relaying old sewer branches, 8 inches, 50 feet; laying new sewer branches, 6 inches, 50 feet; laying new sewer branches, 8 inches, 25 feet. Deposit required \$150. Proposals must be made on blank forms furnished by president board of public improvements. Specifications and forms of contract may be seen at president's office. Certified check, payable to city treasurer for amount of deposit named, on some bank or trust company in St. Louis must accompany bid. Usual rights reserved; Walter B. Dryden, secretary.

Sewerage System.—Real Estate & Securities Co., 7 South Liberty street, Cumberland, Md., will probably want information about sewerage system for residence section.

Sewerage System.—Joseph M. Roman & Co., 1013 Century Building, Atlanta, Ga., want catalogues of materials and appliances used in construction of sewerage system.

Steam Machinery.—Joseph M. Roman & Co., 1013 Century Building, Atlanta, Ga., want catalogues of steam machinery.

Steel-ball Machinery.—Otto A. Barleben, Dortmund, Germany, wants information and prices on machinery for manufacturing one-quarter to three-quarter-inch steel balls for ball bearings.

Sprinkling System.—Bids will be received until July 31 at the bureau of yards and docks, Navy Department, Washington, D. C., for furnishing at the naval magazine, St. Julian's Creek, Va., sprinkling system for buildings Nos. 4, 6, 7 and 8, and water tower and tank, pumping machinery, etc., for improvement of fire system. Copies of plans and specifications can be obtained on application to the commandant, navy-yard, Norfolk, Va. Applications for proposals should refer to Schedule 33. Blank proposals will be furnished on application to the navy pay office, Norfolk, Va., or to the bureau; H. T. B. Harris, paymaster-general.

Starch Machinery.—S. S. Holt, Smithfield, N. C., wants to correspond with manufacturers of machinery for making starch and by-products from the sweet potato.

Tank.—See "Fire-protection Apparatus."

Tank and Tower.—See "Water-works Equipment, etc."

Tape.—Shand Builders' Supply Co., 615 Main street, Columbia, S. C., wants addresses of manufacturers of ladder tape for manufacturing venetian blinds.

INDUSTRIAL NEWS OF INTEREST

Recent Heine Boiler Sales.

One of the recent shipments made by the Heine Safety Boiler Co., 421 Olive street, St. Louis, Mo., is in fulfillment of an order from the Atlantic Coast Line for three boilers of 250 horse-power each for the railway's repair shops at Waycross, Ga.

A Power-Plant Purchase.

The Bankers' Lumber & Timber Co. of Shreveport, La., which is preparing to build a large plant for the manufacture of lumber, has awarded contract for its power machinery to the Houston, Stanwood & Gamble Company of Cincinnati, Ohio.

Big Contract for New Orleans.

A New Orleans company, Messrs. Stauffer, Eshleman & Co., Limited, have received the contract for about \$20,000 worth of sewer pipe, \$6000 worth of cast steel and a large lot of miscellaneous hardware to be used by the government in constructing the Panama canal.

Southern Hardwood Timber Offered.

A 1600-acre tract of hardwood timber property located within three miles of railway facilities is offered for sale by E. B. Lee of Leesburg, Georgia. Write him for details. (In referring to this property last week Mr. Lee's address was erroneously stated as Leesburg, Virginia.)

Wants Quotations from Manufacturers.

Constructors of boilers, engines and other large machinery and manufacturers of lath, shingle and saw-mills are invited to correspond with the Hardy Hardware Co. of Scotland Neck, N. C. This company deals in all kinds of machinery, especially the classes referred to, and is desirous of having quotations from manufacturers.

Telephone Equipment.—Home Telephone Co. of Walker county, Jasper, Ala., wants electrical supplies for equipping telephone exchange.

Tiling.—D. J. Anderson, care Blackburn, Gannon & Co., Orlando, Fla., wants addresses of manufacturers of encaustic tiling.

Tiling.—See "Fireplace Fixtures."

Typewriters.—Louis Figueroa, Buenos Ayres, Argentine Republic, wants addresses of manufacturers of typewriters.

Vats.—Fant Bros., Anderson, S. C., want bids f. o. b. Anderson on four red-oak, white-oak or cypress vats, tongue and grooved planks one and one-half inches or more in thickness, width five feet, length eight feet, depth three feet; to be absolutely watertight and free from ironwork.

Water Meters.—Henry B. F. Macfarland, Henry L. West and John Biddle, commissioners, District of Columbia, Washington, D. C., will receive bids until July 21 for furnishing water meters. Forms, specifications and necessary information may be obtained on application.

Water-works.—Joseph M. Roman & Co., 1013 Century Building, Atlanta, Ga., want catalogues of materials and appliances for the construction of water-works.

Water-works.—Real Estate & Securities Co., 7 South Liberty street, Cumberland, Md., will probably want information about water-works for residence section.

Water-works Equipment.—J. P. Adams, secretary Business League, Vicksburg, Miss., is interested in the purchase of supplies and equipment for water-works plant.

Water-works Equipment, etc.—Mayor, Jackson, Ga., will receive bids until July 26 for machinery and material only for water and light plant; to include one 66x18 boiler, one three-quarter million compound outside-packed pump, one heater and feed pump, 400 tons pipe, 10 inches to 6 inches; 36 hydrants, 75,000-gallon tank on 75-foot tower, one 100-kilowatt alternator and electrical equipment, meters, transformers and arc lamps, 150-horse-power Corliss engine, pole-line material. Specifications will be on file and can be procured from the mayor after July 11; J. B. McCrary, engineer, Empire Building, Atlanta, Ga.

Water-works Supplies.—City of Owensboro, Ky., will receive bids until July 16 for cast-iron pipe, valves, valve boxes and hydrants for the extension of water mains; E. B. Shipley, city engineer.

Woodworking Machinery.—Branchville Pole, Tie & Timber Co., C. D. Chappell, manager, Branchville, S. C., wants machinery for making crossarms, brackets and pins.

Woodworking Machinery.—See "Screen-door Machinery."

A Foundry for Sale.

An established foundry and machine shop, located in a thriving Arkansas town, is offered for sale because the owner wishes to retire from business. Details regarding the plant, its trade, price, etc., can be obtained by addressing "Foundry," care of the Manufacturers' Record.

Manganese Land for Sale.

Manganese property near Elkton, Va., is offered for sale or lease. It is a 300-acre tract located near railway, and is said to be a valuable mine, several thousand tons of high grade ore having already been taken out. For details address Rev. A. L. Harnsberger, New Market, Va.

Wants Mill and Mine Supplies.

Having decided to add a line of mill and mine supplies to its present stock, the W. B. Osborn Machinery Co. of Clarksburg, W. Va., is in the market for products of that character. The company is handling engines, boilers, pumps and other machinery, including steam specialties.

For Sale—Sand-Lime Brick Plant.

Those who may be prepared to consider the purchase of a sand-lime brick plant, the equipment being complete in every particular, are invited to address Messrs. C. D. Franke & Co. of Charleston, S. C. This firm offers for sale a plant which has a capacity of 14,000 bricks daily.

The Shand Engineering Co.

Messrs. Shand & Lafaye, engineers and architects, 1323 Main street, Columbia, S. C., announce that they have decided to confine their work to strictly architectural subjects, and have transferred their engineering work to the Shand Engineering Co., which has been incorporated by G. E. Shand, E. F.

Lilly and Geo. E. Lafaye. This company will conduct a general engineering business, and is prepared to correspond with the projectors of any work in which such service is required.

Brown Iron-Ore Lands.

Investors or developers who can be interested in Southern iron properties are invited to address E. M. Ragland of Sheffield, Ala., for particulars regarding 1000 acres he offers for sale. The tract contains brown iron ore said to be of good quality located within one mile of railway, and with ample water supply throughout the year.

Engineers Want Catalogues.

Manufacturers of machinery are invited to note that Messrs. Joseph M. Roman & Co., engineers, 1013 Century Building, Atlanta, Ga., are revising their catalogue files and invite manufacturers and publishers to send them catalogues of steam machinery, electric machinery and apparatus, hydraulic machinery and materials for construction and appliances for water-works and sewerage systems.

Mr. J. A. Prescott, Sales Manager.

Mr. J. A. Prescott of the J. A. Prescott Machinery Co., Lincoln Trust Building, St. Louis, Mo., has recently become the sales manager of the Blaisdell Machinery Co. of Bradford, Pa. Mr. Atwood Benton, who succeeds him as manager of the Prescott Company, brings to his position a ripe experience with the Mexican General Supply Co. He is well known as a mining and mechanical engineer and as a mining machinery salesman.

Speaking of Progressive Tools.

During the recent convention of the International Railway Master Boilermakers' Association, held at Milwaukee, Charles F. Taylor, Jr., superintendent Long Island Railroad at Morris Park, N. Y., said: "In speaking of progressive tools, I suppose you have all seen the Allen riveter. We drive up all the back heads and all the mud rings. We have used that over a year, and find we do not have to caulk a mud-ring rivet. Before I came away we put in 110 rivets in about two hours." This riveter is made by John F. Allen, 370 Gerard avenue, New York.

Freight Cars for Sale.

Railways, lumbering companies, coal-mining corporations and other industrial operators needing rolling stock are advised that J. E. Bowen of Norfolk, Va., has a large stock to offer. Because of a \$900,000 purchase from the Baltimore & Ohio Railroad last week, Mr. Bowen has a new lot of flats, boxes and gondolas of 50,000, 55,000 and 65,000 pounds capacity, which he offers for sale. These cars will be equipped with automatic couplers and airbrakes and otherwise rehabilitated to pass interchangeable points. They are offered as good purchases for people in the market for railway freight cars.

Brady Construction & Engineering Company.

It is announced that the Brady Construction Co., contractor and builder, of Fairmount, W. Va., has changed its name to the Brady Construction & Engineering Co. and removed its main offices to the fifth floor of the Union Trust Building, 7th and Market streets, Parkersburg, W. Va. The new company will continue its general contracting activities, and in addition engage in general engineering, having purchased the maps, plans, etc., of S. D. Brady & Bro., civil, mining and consulting engineers. Mr. S. D. Brady is president of the new company, and G. E. Suck is secretary-treasurer.

Recent Hughes Well Contracts.

The Hughes Specialty Well Drilling Co. of Charleston, S. C., continues to receive important contracts for well-drilling. It has recently completed a 4½-inch 500-foot artesian well for R. W. Parsons of New York city for his new winter home to be built in Summerville, S. C. It has also closed contracts for two 10-inch 300-foot artesian wells for the Phosphate Mining Co. at Lakeland, Fla.; two 10-inch wells for H. A. M. Smith, trustee, near Bowling Green, Fla.; one 14-inch 400-foot artesian well for the Savannah (Ga.) Lumber Co.; one 6-inch 300-foot artesian well for the Planters' Fertilizer & Phosphate Co. of Charleston, S. C., and the re-paving of a well for J. T. Roberts of Summitt, Ga.

Goulds in St. Louis.

The many friends and customers of the Goulds Manufacturing Co., Seneca Falls, New York, will be pleased to learn that it has recently opened a branch office in the Chemical Building, St. Louis, Mo. This will be under the management of H. C. Dudley and will be appreciated by those interested in economical power-pumping machinery, es-

pecially by engineers and their clients, as it will enable prospective customers to secure promptly full information pertaining to the Goulds complete line of efficient triplex, rotary, centrifugal and electric pumps, deep-well working heads, etc. Mr. Dudley is well known in the Southwest, and will be pleased at all times to receive specifications and figure on any pumping propositions.

An Original Fan System.

One of the original fan system heating and ventilating plants installed by the Buffalo (N. Y.) Forge Co. in Buffalo was placed in the first works built by the Geo. N. Pierce Company. This outfit was built a quarter of a century ago, and was used in the factory in which the Pierce bicycles have been manufactured. The Pierce buildings have long been overcrowded, and since the fire, which destroyed a part of the Hanover-street plant last winter, plans have been drawn up and contracts let for a group of buildings located on the Pan-American site at Elmwood avenue and Belt Line, which in equipment and construction will be unexcelled. The contract for heating and ventilating the buildings in the new Elmwood-avenue plant, where the Pierce 1907 cars will be built, has been awarded to the Buffalo Forge Co., which designed the original installation.

Rhodes Improved Metallic Packing.

There is a large and increasing demand for metallic packing, and purchasers of discernment seek to obtain that product which gives the best general satisfaction in practical use. Realizing this, manufacturers have aimed to produce a packing that satisfies the most exacting buyers, and it may be mentioned that the Rhodes Improved Metallic Packing Co. is a Southern enterprise which has been highly successful in this direction. The company named manufactures piston-rod and valve-stem packing, the superior features of which are satisfying users of stationery engines, locomotives, pumps for ammonia, water, air, gas, oil, etc. The Rhodes Improved Metallic Packing Co. has its general offices in the Security Building, Galveston, Texas. Its active officers are R. P. Clark, president; E. N. Sanctuary, secretary, and H. P. Rhodes, general manager.

Selden-Breck Construction Co.

Recent important industrial undertakings at Memphis, Tenn., include the plans of the Memphis Warehouse Co. for establishing a system of warehouses for cotton. It is stated that the company intends to expend about \$500,000 during the summer and be in a position to handle half of the city's crop next fall, and that next summer another \$500,000 will be invested for further facilities. A unique feature of the buildings will be a gravity trolley that will dispense with all the mules and some of the laborers for handling the bales of cotton. Mr. Daniel Breck has designed the system, and has entire confidence in the success of the plan, and that the Memphis cotton factors also have that confidence is evidenced by the fact that they have awarded contract to install the system. This contract includes the big warehouse and its trolley system, and has been awarded to the Selden-Breck Construction Co., Fullerton Building, St. Louis, Mo. Mr. Breck and O. G. Selden are the managers of this company. Their company also has another big contract in Memphis for the erection of a 15-story office building for the Tennessee Trust Co.

New Firms in Philadelphia Bourse.

The Manufacturers' Record is informed that the exhibition department of the Philadelphia Bourse at Philadelphia, Pa., has recently been augmented by the installation of additional exhibits of machinery. Some of the most prominent manufacturers in the country, as well as dealers in machinery, are represented. Among them is Messrs. Hill, Clarke & Co. of Boston, Mass., machinery merchants, who have opened a branch office in the Philadelphia Bourse exhibition and will display a complete line of equipments; the Hawes-Laanan Company of Philadelphia will display its woodworking machinery and samples of product; the Kerr Steam Turbine Co. of Wellsville, N. Y., has placed on exhibition one of its turbines in operation; the H. A. Heinel Company of Wilmington, Del., is displaying its gas and gasoline motors, for which Messrs. R. M. Remmer & Son are Philadelphia agents. The Economy Service Co. has also taken space and the Ruboll Belt-ling Co. has increased its space, this being its second increase within one year. Mr. W. H. Rogers is superintendent of the Philadelphia exhibition department, and can be addressed for information.

The Triple State Investment Co.

The Triple State Investment Co. of Charleston, W. Va., has been organized to handle coal and timber lands in West Virginia and

contiguous States. Its capital is \$25,000, and its officers are James Flynn, president; W. W. Mucklow, vice-president; E. P. Mucklow, treasurer, and C. W. Morton, secretary. Mr. Flynn has been engaged in the timber business for years in Pennsylvania, recently moving to West Virginia, and now operates three large saw-mills in different localities. He is interested in several large boundaries of good virgin timber and is conversant with the localities in West Virginia, Virginia, Tennessee and Kentucky. Messrs. W. W. and E. P. Mucklow are experienced operators, originally from the anthracite coal fields of Pennsylvania, who have been in West Virginia for six years. They are general manager and treasurer, respectively, of 17 mines, operating the different kinds of coal in West Virginia. Mr. Morton, the secretary, has been located in West Virginia six years, and is thoroughly conversant with the coal and timber fields, having been over them frequently in different capacities. He is to give his personal supervision to the business of the new company.

Chase Water-Wheels and Sawmills.

A class of mechanical equipment usually in demand wherever industrial developments are progressing is that comprised in turbine water-wheels and circular-saw mills, together with kindred machinery and their accompanying devices. In designing and manufacturing machinery of this kind New England has for many years been prominent. The enterprises referred to have become known throughout the entire country, and among them is the Chase Turbine Manufacturing Co. of Orange, Mass. This company manufactures turbine water-wheels and circular-saw mills in great variety, including shingle machines and bunchers, horizontal resawing machines, circular and drag cut-off saw machines, power-feed self-feeding saw machines, lathe machines and bunchers, traveling-bed planers, fan blowers and a great variety of other work. A Chase catalogue is issued describing all the company's machines in detail, and purchasers of the kind of machinery to which reference is made are advised to investigate the Chase designs before awarding their contracts. Write to the Chase Turbine Manufacturing Co. at Orange, Mass., and say that you want to know all about the machinery it builds.

News of Traylor Engineering Co.

Several recent announcements of the Traylor Engineering Co. of 114 Liberty street, New York, are of interest. They include reference to the fact that Enos Ayres, son of the well-known mining expert, H. R. Ayres, deceased, has joined the Traylor Engineering Co. as engineer salesman in the New York city district. Mr. Enos Ayres has had the benefit of his father's training, besides serving an apprenticeship in various mines and mills of Colorado and Utah, and having had the advantage of a technical education, he is competent to advise mining men as to what character of plant or machinery will successfully treat their ores. The Traylor Engineering Co. has received a contract to build a 100 stamp mill for the Palmer Mountain Tunnel & Power Co., mines in Washington near Midway, B. C., and the machinery will be shipped in 90 days. A Traylor contract just completed was to construct and re-equip the Green Mountain Mining Co.'s mill at Silverton, Col. This plant was originally designed and built by Traylor, and when about completed was seriously damaged by a snowslide.

The reconstructed building is designed for two units of 140 tons capacity each per day; only one will be operated at present. There is sufficient power to bring the output up to 280 tons whenever desired. Double eight-hour shifts will be run for the present, each shift requiring about 40 in the mine and 20 in the mill.

A novelty in the Green Mountain camp which will be watched with interest is the Traylor centrypact screens. Eleven have been installed.

Something About Scherzer Bridges.

American railway managements are noted for their progressiveness. They are constantly seeking to modernize their railways, and readily adopt successful improvements that increase efficiency, safety and economy of operation. One of the improvements which railway managers have been adopting quite freely during recent years is the Scherzer rolling lift bridge, the advantages of this type having become quickly recognized by engineers. The success of the four-track Scherzer bridge, completed in 1895 at Chicago for the Metropolitan Elevated Railway Co., caused the New York, New Haven & Hartford Railroad to adopt this type at the entrance to the new South Terminal Station, Boston, where six tracks had to be accommodated across Fort Point Channel. If a

six-track swing bridge were built, all the tracks would have to be built on one movable structure. Any injury to the structure would tie up the railroad traffic at this important station. With the Scherzer type the six tracks could be accommodated by building three double-track Scherzer rolling lift bridges side by side, to be operated either jointly or separately, as desired. Injury to one bridge would not interfere with traffic across the remaining bridges. The speed of operation, safety, economy and efficiency demonstrated by this large bridge induced the same railroad company to decide to remove its center-plier swing bridges at Bridgeport, Conn.; Westport, Conn.; Coscob, Conn.; Housatonic river, Connecticut; Connecticut river, Connecticut; Bronx and Hutchinson rivers, New York, and Neponset river, Massachusetts, and replace them with modern Scherzer rolling lift bridges, each accommodating four to six tracks, the four and six-track bridges each formed of double-track bridges placed side by side. Whenever the traffic of a railroad increases and requires additional parallel tracks and bridges the Scherzer bridges can be readily added without interfering with the existing traffic or bridges, as they can be built alongside of each other to carry any number of parallel tracks desired. Many other instances of contracts awarded for these bridges both in the United States and in Europe have been referred to previously in the Manufacturers' Record. Some of the most recent orders was one by cable from the Egyptian government for a large double-track Scherzer rolling lift bridge. Another was from Burma, India, for a long-span Scherzer bridge. For all of these bridges the Scherzer Rolling Lift Bridge Co., Monadnock Block, Chicago, Ill., has furnished the designs, plans, specifications and the consulting engineer services, co-operating with the engineers of the various railway companies and governments.

TRADE LITERATURE.

New Stanley-G. I. Bulletin.

The Stanley-G. I. Electric Manufacturing Co. of Pittsfield, Mass., has placed on the market a new and novel type of induction motor made in various sizes up to 7½ horsepower. The novel feature of this motor is in having the laminated iron core of the stator freely exposed to the air around its entire periphery. Because of the fact that the frame is held together by means of a riveted construction, the motor will be known as the riveted-frame type. The cast-iron ribs which are used with the ordinary induction motors are entirely done away with, and it is claimed thereby all metal is used to much higher efficiency than ever before attained in induction-motor design.

Cementology.

In "Cementology" for June is presented some timely facts regarding cement, especially as to the time of setting. This little publication tells that the standard specifications for Portland cement covering the time of setting are as follows: It shall develop initial set in not less than 30 minutes, but must develop hard set in not less than one hour or more than 10 hours. Then is quoted the progress report of the committee of the American Society of Civil Engineers, followed by some statements of value to people who are interested in the use of Portland cement. "Cementology" is issued every month by the Whitehall Portland Cement Co. of Philadelphia, Atlanta and Boston.

Modern Corn Shellers.

An illustrated pamphlet issued by the Tiffin Wagon Co. of Tiffin, Ohio, gives illustrations and descriptions of modern corn shellers of various styles and sizes, besides different kinds of farm wagons and other manufactures needed by the progressive farmer. The company named operates a large manufacturing plant and has established a high reputation for its products throughout the agricultural communities of the country. Its corn shellers are of approved design, made of the best material and with the aid of the best workmen. Its wagons have found a ready market and are appreciated by those interested in agricultural development. The Tiffin Wagon Co. is located at Tiffin, Ohio, while its New York office is at 110 Reade street, Joseph C. Kuske being the manager.

The Whiting Electric Travelers.

The Whiting Foundry Equipment Co., Harvey, Ill. (Chicago suburb), is issuing its catalogue No. 45, containing 162 pages illustrative and descriptive of electric travelers and cranes of all types, over 100 illustrations of late crane installations in foundries, machine shops, railway shops, power-houses, steel plants, etc., including, besides electric travelers and hand-power cranes, numerous jib and bracket cranes, pillar cranes, gantry cranes, transfer cranes, electric transfer

tables, special derricks for railroad and marine service, etc. This catalogue is printed in two colors, with attractive cover, and designed to place in sectional catalogue binder issued by this company. It includes list of users of Whiting electric traveling cranes from heaviest to lowest capacities; thoroughly indexed.

The New Wesco Catalogue.

The Wesco Supply Co., 7th street and Clark avenue, St. Louis, Mo., has just issued supply catalogue No. 100, containing a complete list of all electrical supplies for the dealer, central-station man, mill and shop operative, etc. It is a most comprehensive publication. A strikingly effective plan of keeping the catalogue always up to date has been put into operation by the manager of the advertising department, H. P. Didrikson. Monthly price lists and discount sheets will be issued so that the dealer may know the lowest quotations. Where new supplies or new types of established specialties are produced descriptions will be printed in the monthly publication in such place as will bear a direct relation to similar apparatus in the catalogue itself. The Wesco Company is about to issue a telephone-supplies pamphlet that will interest purchasers.

Ellis System of Sewage Removal.

An important sanitary feature in connection with large buildings of any description is the removal of sewage and all the waste as rapidly as created and the absolute prevention of any back flow of sewage or sewer gas from the public sewer. If there is a good fall from basement level to public sewer these conditions can be obtained by trapped gravitation sewers. But it often happens that a discharge from basement to sewer or other point of outfall cannot be obtained by gravitation. In these cases some artificial means must be employed to raise and discharge the liquid waste and ground water. The Ellis automatic ejector system does this. It is stated it will discharge the liquid refuse of a building in a simple, sanitary and economical manner, without coming in contact with the air of the building and making the entry of sewage or sewer gas from the public sewers an impossibility. Compressed air, steam, electricity or water is the motive power in the Ellis system. The system and the various applications of the Ellis automatic sewage ejector or sewer lift and other appliances are fully described by printed word and photographic views in an interesting pamphlet now being distributed. It is seen by perusal of the publication that the Ellis system is also applicable to towns and cities and that many important installations have been made throughout the country, the Louisville & Nashville Railroad Co. of Louisville, Ky., and the Maryland Theater of Baltimore, Md., being among the Southern users. The Ellis Company, engineer and contractor, offices at 216 West 23d street, New York, controls the system. Its officers are George V. Ellis, president and engineer; Emory W. Osburn, vice-president, and William L. Mercer, treasurer.

The Iron and Metal Trades.

The Iron Age in its weekly review says: "The monthly pig-iron returns collected by the Iron Age show that the blast furnaces of the country, what with poor working in June and a steady crop of blowings out, are still falling behind in production. Our statistics of the coke and anthracite furnaces for June, 30 days, show an output of 1,970,733 tons, as against 2,008,746 tons in the 31 days of May and 2,073,222 in the 30 days of April. Thus each succeeding month shows a smaller daily rate of production. The weekly capacity of the 290 furnaces active on July 1 was 460,490 tons, as against 472,622 for 296 furnaces on June 1. It is characteristic of the situation in steel-making irons that the holiday shutdown at the steel plants gave a very welcome chance to accumulate pig-iron. The scarcity is most pronounced in Bessemer pig in the Central West. In the East steel-makers are pretty well covered for their requirements for the third quarter, and are not seriously considering purchases for the last quarter. The general tone of the reports throughout the country with reference to the market in foundry iron is encouraging, and shows a firmer feeling. In the Eastern markets the local furnaces are meeting competition for such business as it not dependent upon specific brands."

FINANCIAL NEWS

The MANUFACTURERS' RECORD invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office MANUFACTURERS' RECORD,
Baltimore, Md., July 11.

The Baltimore stock market, while displaying a little more activity during the past week as compared with the next preceding period, was without particular feature. Prices were generally steady.

In the trading United Railways common sold at 15; the trust certificates at 15 1/4; the incomes from 72 1/2 to 73 1/2; the trust certificates at 71 1/2; the 4s at 92 1/4 to 92 1/2; United Light & Power 4 1/2s, 95 1/2 to 95. Consolidated Gas, Electric Light & Power preferred was dealt in at 87, and Gas 4 1/2s at 99 3/4. Seaboard common changed hands at 30; the new common at 28; the new second preferred at 56; Seaboard 4s at 87 to 87 1/2, and the 10-year 5s at 101 1/4 to 101 1/2. Cotton Duck 5s were traded in at 86; Consolidated Cotton Duck common at 11 1/4; G. B. S. Brewing common at 9 1/2; the incomes from 36 3/4 to 37 1/4, and the 1sts from 62 to 62 1/4.

Howard Bank sold at 12 1/2; Union, 115; Merchants', 178; Maryland, 122; Fidelity & Deposit, 135; Maryland Casualty, 56 to 55; Mercantile Trust, 148.

Other securities were traded in as follows: Houston Oil, 8 to 7 1/4; Atlantic Coast Line 4s, 100; do. new 4s, certificates, 91 1/2 to 92; Atlanta Consolidated Street Railway 5s, 104 1/2; Norfolk Railway & Light 5s, 99 1/4; Baltimore City 5s, 1916, W. L., 111; do. 3 1/2s, 1928, 102 3/4; do. do. 1930, 103; Chicago, Rock Island & Pacific refunding 4 1/2s, 94; Alabama Consolidated Coal & Iron preferred, 90; do. 5s, 93 1/2; Frederick Turnpike, 1 1/2; Florida Southern 4s, 94 3/4 to 95; Fort Worth & Denver City 1st 6s, 112; Georgia & Alabama 5s, 110 to 109 3/4; Georgia Southern & Florida 5s, 110 1/4 to 111; Newport News & Old Point 5s, 99; Norfolk & Carolina 5s, 116 1/2; Virginia Midland 3ds, 110; Wilmington & Weldon 5s, 115 1/4 to 115; Virginia Century, 94 1/4; Raleigh & Augusta 6s, 123; Richmond & Danville debenture 5s, 111 1/4; Detroit United 4 1/2s, 94 1/2; Atlantic Coast Line stock, 136; Norfolk Railway & Light stock, 19; Central Railway Consolidated 5s (Baltimore), 114 1/2; Charlotte, Columbia & Augusta 1sts, 115 1/2; Petersburg B 6s, 125 1/4; West Virginia Central 6s, 106 1/4; Atlantic Coast Line of Connecticut 5s, certificates, 110; Carolina Central 4s, 97; Maryland & Pennsylvania Terminal 5s, 105 1/4; Petersburg A 5s, 112; South Bound 5s, 111 1/2; Western North Carolina 6s, 111 1/4; Baltimore City 3 1/2s, 1940, 103; Virginia deferred, Brown Bros. certificates, 24 to 24 1/2; Western Maryland 4s, 85 1/2; Lynchburg Water 4s, 1938, 101 1/2; Colorado Southern 4s, 93 3/4 to 93 1/2; Georgia, Carolina & Northern 5s, 110.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended July 11, 1906.

Railroad Stocks.	Par.	Bid.	Asked.
Atlanta & Charlotte.....	100	37 1/2	38
Atlantic Coast Line of Conn.....	100	340	358
Georgia Southern & Florida.....	100	30	30
Georgia Sou. & Fla. 1st Pref.....	100	88 1/2	90
Georgia Sou. & Fla. 2d Pref.....	100	80	87
Norfolk Railway & Light.....	25	18 1/4	19
Seaboard Company Common.....	100	27 1/4	28
Seaboard Company 2d Pref.....	100	56 1/2	59
United Railways & Elec. Co.....	50	15 1/4	16 1/4
Bank Stocks.	Par.	Bid.	Asked.
Citizens' National Bank.....	10	28	28
Commercial & Far. Nat. Bank.....	100	130	130
Com. & Far. Nat. Bk. Blue Cfs.....	100	140	160
Farmers & Mer. Nat. Bank.....	40	55	55
Maryland National Bank.....	20	180	180
Merchants' National Bank.....	100	150	150
National Bank of Baltimore.....	100	117 1/2	120
National Exchange Bank.....	100	150	150
National Howard Bank.....	10	12 1/4	12 1/2

[Continued on Page 740.]

NEW ORLEANS RAILWAY & LIGHT CO.

OFFICIAL STATEMENT TO NEW YORK STOCK EXCHANGE.

New Orleans Railway & Light Co., a corporation duly incorporated under the laws of Louisiana, hereby makes application to have placed on the regular list of the New York Stock Exchange its \$13,643,000 par value general mortgage 4 1/2 per cent. gold bonds for \$100 each, numbered 1 to 13,357, 14,886 to 14,987, 14,992 to 15,000, 27,551 to 28,000, and 28,101 to 28,125, all inclusive, and \$10,000,000 par value 5 per cent. non-cumulative preferred stock (100,000 shares), and \$20,000,000 par value common stock (200,000 shares).

The total authorized amount of the capital stock, 100,000 shares being preferred stock and 200,000 being common stock, has been duly issued and is now outstanding. The preferred stock is entitled in preference and priority over the common stock to dividends at the rate of, but not exceeding, 5 per cent. per annum, such dividends being non-cumulative, and the preferred stock is entitled to no other or further share of the profits. In the event of dissolution or liquidation, the holders of the preferred stock are entitled to be paid in full the par value of their shares, the remaining assets to be divided among the holders of the common stock. Both classes of stock have equal voting power.

Dividends of 1 1/4 per cent. each have been paid for the quarters ending December 31, 1905, and March 31, 1906, on all said preferred stock.

Said general mortgage 4 1/2 per cent. gold bonds are dated July 1, 1905, and mature July 1, 1935, bear interest, payable semi-annually on January 1 and July 1 in each year, and both principal and interest are payable at the office of The New York Trust Co. in the City of New York, or, at the option of the holder, at the office of the New Orleans Railway & Light Co. in the city of New Orleans, in gold coin of the United States of America or of equivalent to the present standard of weight and fineness, without deduction for any tax or taxes which the New Orleans Railway & Light Co. may be required to pay thereon or retain therefrom under any present or future law of the United States of America, or of any State, County or Municipality therein. Said bonds of the New Orleans Railway & Light Co. are secured by a general mortgage, dated July 1, 1905, made by said Company to The N. Y. Trust Co., as trustee, mortgaging, pledging and transferring all the property, real and personal, rights, titles, franchises, interests, privileges, immunities, rents, issues, profits, revenues and income of the Railway Company. Said bonds are coupon bonds, but they are subject to registration as to principal. The transfer agent of said bonds in the city of New York is the New York Trust Co. The New Orleans Railway & Light Co. has the right to redeem any or all of the said bonds on the 1st day of January or July in any year prior to their maturity upon 60 days' notice at 105 per cent. of their par value and accrued interest.

The total authorized issue of said bonds is \$30,000,000, and said bonds are issuable under Sec. 1, Article first, of mortgage, as follows:

Subdivision (a). To enable the company to satisfy its obligations and for its general corporate purposes.....	\$15,000,000
Subdivision (b). For underlying bonds of subsidiary companies.....	12,814,000
Subdivision (c). For acquisitions, extensions, betterments, improvements, etc., and other lawful corporate purposes.....	2,186,000
Total.....	\$30,000,000

Of the aforesaid general mortgage bonds, the following, pursuant to provisions contained in the mortgage securing the same, have already been issued, being the bonds in respect of which application to list is herewith made:

Subdivision (a) of section 1 of article first of said mortgage.....	\$13,357,000
Subdivision (c) of section 1 of article first of said mortgage.....	286,000
Total.....	\$13,643,000

The underlying bonds of the subsidiary companies referred to in the foregoing table, as they now exist—\$32,000 par value in the aggregate having been retired since the execution of said general mortgage—are as follows:

	Authorized Issue.	Issue.	Redeemed.	Outstanding.
New Orleans City & Lake R. R. Co. Cons. First Mtg. 5 per cent. Bonds, due January 1, 1913.....	\$3,000,000	\$3,000,000	\$214,000	\$2,786,000
New Orleans City R. R. Co. Gen. Mtg. 4 1/2 per cent. Bonds, due July 1, 1913.....	3,250,000	3,200,000	.....	3,200,000
New Orleans Traction Co., Ltd., First Mtg. 6 per cent. Bonds, due July 1, 1917.....	150,000	150,000	60,000	90,000
New Orleans Power-House Co., Ltd., First Mtg. 5 per cent. Bonds, due July 1, 1913.....	200,000	200,000	.....	200,000
New Orleans & Carrollton R. R. Co. Mtg. 6 per cent. Bonds, due August 1, 1906.....	300,000	300,000	205,000	95,000
New Orleans & Carrollton R. R. Co. Mtg. 6 per cent. Bonds, due February 1, 1907.....	350,000	350,000	225,000	125,000
New Orleans & Carrollton R. R. Co. Mtg. 5 per cent. Bonds, due February 1, 1933.....	2,000,000	1,780,000	.....	1,780,000
Canal & Claiborne R. R. Co. First Mtg. 6 per cent. Bonds, due May 1, 1916.....	800,000	749,000	.....	749,000
Edison Electric Co. First Mtg. 5 per cent. Bonds, due January 1, 1923.....	2,500,000	2,500,000	.....	2,500,000
Merchants' Electric Co. First Mtg. 5 per cent. Bonds, due July 1, 1923.....	300,000	300,000	.....	300,000
St. Charles Street R. R. Co. First Mtg. 4 per cent. Bonds, due January 1, 1952.....	600,000	375,000	.....	375,000
Orleans R. R. Co. First Mtg. 6 per cent. Bonds, due April 1, 1912.....	300,000	300,000	.....	300,000
Orleans R. R. Co. Second Mtg. 6 per cent. Bonds, due 1907-1912.....	100,000	100,000	.....	100,000
New Orleans Gas Light Co. First Mtg. 5 per cent. Bonds, due April 15, 1913.....	700,000	530,000	454,000	76,000
New Orleans Lighting Co. First Mtg. 5 per cent. Bonds, due March 1, 1925.....	2,000,000	2,000,000	1,894,000	106,000
Total.....				\$12,782,000

The New Orleans Railway & Light Co. is authorized in its general mortgage to consent to the renewal or extension of any of the aforesaid underlying bonds and of the mortgages securing same: "Provided, however, that such renewal or extension shall not be for greater principal amount (than the principal amount of the bonds outstanding under such mortgages, and shall not be at a greater rate of interest than the present rate, and such extension shall not be to a date later than July 1, 1935."

The Company covenants in said general mortgage that it will not, without the written consent of the trustee thereunder, sanction or permit the issue or guaranty of any bonds by any subsidiary company unless effective provision be made that the bonds so issued or guaranteed shall be transferred to the trustee under said general mortgage, subject to the trust created thereby; provided, however, that there may be issued additional bonds under mortgages of the subsidiary companies at present in force, for the purpose of retiring a like amount of underlying bonds of such or other subsidiary companies; that is, where a provision for such issue exists in the mortgages of said subsidiary companies.

Among the securities owned by the New Orleans Railway & Light Co. which are specifically described in said general mortgage are the following:

Franchises.	Name of Company.	Par Value	Shares	Total Outstanding.
Expire from 1913-1962 except two unimportant expire 1915-1917.....	New Orleans City Railroad Company Preferred Stock.....	\$100	24,208	24,208
Expire 1915-1917.....	New Orleans City Railroad Company Common Stock.....	100	47,531	49,910
Expire 1921.....	Orleans Railroad Company.....	50	4,694	4,694
Expire 1923.....	New Orleans & Carrollton R. L. P. C. Preferred Stock.....	100	45,686	46,000
Expire 1926.....	New Orleans & Carrollton R. L. P. C. Common Stock.....	100	24,252	25,000
Expire 1926.....	St. Charles Street Railroad Company.....	100	9,289.5	9,533
Perpetual.....	New Orleans Gas Light Company.....	100	35,580	37,500
Perpetual.....	New Orleans Lighting Company.....	100	20,000	20,000

Besides owning stock of the New Orleans City R. R. Co. to the extent shown in the above table, the properties of the latter company are leased to the New Orleans Railway & Light Co. until December 31, 1955, by instrument dated March 31, 1902. The lease provides for:

(a) The guaranty by the lessee of dividends as follows on the stock of the New Orleans City R. R.:

(1) Five per cent. annual dividends upon the \$2,500,000 preferred stock for the term of the lease;

(2) Three-quarters of 1 per cent. annual dividends upon the \$5,000,000 common stock until January 1, 1908, and 1 per cent. annually thereafter.

(b) The assumption of the payment of the principal and interest of the New Orleans City & Lake R. R. Co. Consolidated 5 per cent. bonds, the New Orleans City R. R. Co. general mortgage 4 1/2 per cent. bonds, the New Orleans Traction Co., Limited, first mortgage 6 per cent. bonds, and the New Orleans Power House, Limited, first mortgage 5 per cent. bonds.

Besides owning all the stock of the New Orleans Lighting Co. and the stock of the New Orleans Gas Light Co. to the extent shown in the above table, the properties of the New Orleans Gas Light Co. are leased to the New Orleans Lighting Co. for a term of years ending March 1, 1925. The lease provides:

(a) For the guaranty by the lessee of dividends at the rate of 6 per cent. per annum on the \$3,750,000 of stock of the New Orleans Gas Light Co.

(b) For the assumption of the payment of the principal and interest of the first mortgage 5 per cent. bonds of the New Orleans Gas Light Co.

The New Orleans Railway & Light Co. owns and operates directly or indirectly, by owning or controlling securities of the companies as aforesaid, the following:

Railway.—There are about 190 miles of track, occupying most of the principal streets of the city. Track extensions of about four miles additional are contemplated. About 500 cars are operated.

Main Station.—Occupying the entire square, bounded by Richard, Water, South Peters and Market streets, upon which is constructed a modern steam and electric station in which the machinery now installed and under contract approximates 25,000 horse-power, one-half of which capacity is used for railway purposes and balance for supply of electric light and power for commercial service and city lighting.

Baronne Station.—Located between Baronne and Dryades streets. A steam and electric plant, of a capacity approximating 6500 horse-power, used for commercial lighting and power purposes. The building also contains the executive offices of the company.

Claiborne Station.—Located between North Peters and Marigny streets on Elysian Field avenue, occupying about half of the square. A combined steam and electric plant of which machinery now installed and under contract approximates 6000 horse-power.

St. Charles Station.—Located between Marigny and Manderville streets on North Peters street. A steam and electric plant of 1500 horse-power capacity.

Napoleon Avenue Station.—Located on Napoleon avenue and Tchoupitoulas streets. A combined steam and electric plant of over 1000 horse-power capacity.

The combined generating capacity of the above described plants is in excess of 40,000 horse-power, exclusive of converting apparatus for railway and lighting purposes in such stations and in sub-stations. The two electric sub-stations have a combined capacity of 4000 horse-power. The figures respecting capacity can be greatly exceeded under overload conditions.

Gas Plant.—A water-gas plant occupying the square bounded by Robertson, Magnolia, Perdido and Gravier streets, and a portion of two adjoining squares. The generating plant has a daily capacity of 3,600,000 cubic feet per day and holders aggregating 2,000,000 cubic feet.

Real Estate.—This includes a large number of valuable parcels of real estate situated in various parts of the city. Among these are four squares of ground located on Canal street, the main street of the city. Each square comprises about 90,000 square feet, of which area approximately one-half is occupied by car barns; two squares of ground on Arabelle street, on one of which is located a large car barn, the second being used for storage of cars.

There are car houses and shops as follows: Arabelle barn, magazine shops, Canal barn, Prytanla barn, Carrollton barn and shops, Esplanade barn, Poland barn, Orleans barn and Marlis barn. These barns have ample capacity to accommodate the rolling stock owned by the company.

Franchise.—The gas franchise is perpetual and is also exclusive until 1925. The electric light franchise is perpetual, and the street railway franchises are generally for from thirty to fifty years.

General.—The company now supplies all the gas, electric lighting and street railway service in the city of New Orleans, and all the municipal lighting of the streets of the city. Serving at present a connected load equivalent to 500,000 16 candle-power incandescent lamps, which may be increased 50 per cent. when apparatus now on order and under construction is installed. The present and immediately prospective generating capacities are respectively 7500 and 12,000 kilowatts for lighting purposes, and respectively 10,000 and 15,000 kilowatts for railway purposes. The new apparatus will be in operation before the end of 1906. The extensions being made and the new apparatus being installed in the Main Station and the Claiborne Station are of the most modern type. The company has just completed the installation of the complete new arc lighting system installed to serve the city lighting under a contract extending to 1911. In connection with this new and modern municipal lighting system and to serve the present and prospective extension requisite for accommodating a rapidly growing business, over 100 miles of additional underground conduit has recently been installed.

The New Orleans Railway & Light Co. was incorporated pursuant to a certain plan dated Feb. 8, 1905, for the reorganization of the New Orleans Railway Co. [This plan was outlined in the *Chronicle* of February 11, 1905, page 651.—Ed.] Under said plan there were deposited with The New York Security & Trust Co., as depository, all of the outstanding bonds of the New Orleans Railway Co. except \$7200, par value, and all of the preferred stock except 111 shares, and all of the common stock except 3 shares of said Railway Company.

On June 12, 1905, pursuant to said plan, the New Orleans Railway & Light Co. was organized under the laws of Louisiana for the period of 99 years, and, after foreclosure sale, acquired all the properties of the New Orleans Railway Co. by instrument of conveyance and deed of sale dated July 18, 1905, and in consideration of such sale and transfer issued its securities as follows:

\$9,985 shares preferred stock of a total authorized issue of 100,000 shares.
\$99,985 shares common stock of a total authorized issue of 200,000 shares.
\$13,357,000 general mortgage 4½ per cent. gold bonds secured by the mortgage aforesaid, dated July 1, 1905, executed by said company to The New York Trust Co., covering the property so acquired.

\$846,000 in cash.
The balance of the preferred and common stock—to wit, 15 shares of each—were issued to the incorporators in cash for the full par value thereof, \$3000, so that all of said stock, preferred and common, is now outstanding.

In addition to the \$13,357,000 of the bonds issued as aforesaid, there were issued at the same time or subsequent thereto bonds aggregating \$2,643,000, of which \$286,000 have been sold, and the proceeds thereof, as provided in said plan of agreement and reorganization, have been applied to the expenses of the reorganization, the payment in part of the floating debt of the New Orleans Railway Co., and for additions, improvements and extensions, as contemplated in the mortgage securing the same. \$2,357,000 have not yet been sold and are partly in the treasury of the New Orleans Railway & Light Co., or are hypothecated as collateral for loans to the said company.

All of the said bonds issued under the mortgages of the New Orleans Railway Co. dated July 1 and November 1, 1902, except \$7200, the holders of which did not deposit same under the plan of reorganization, together with \$2,843,000 treasury bonds, which had been executed by the New Orleans Railway Co. and certified by the trustee, as well as all the balance of said bonds engraved for issue under said mortgages, have been duly canceled and cremated, and no further bonds can be issued under said mortgages dated July 1 and November 1, 1902.

The balance-sheet of the New Orleans Railway & Light Co. as of December 31, 1905, the close of its last preceding fiscal year, is as follows:

NEW ORLEANS RAILWAY & LIGHT CO. GENERAL BALANCE SHEET DECEMBER 31, 1905.

Assets.	
Leasehold, real estate, franchises, stocks of affiliated companies, etc.	\$40,870,085 86
Additions, improvements and betterments to property of New Orleans City R. R. Co.—under lease.	2,177,007 38
Other additions, improvements and betterments.	1,073,589 42
Investments.	13,745 36
Leasehold equity acquired, representing the par value of bonds retired of the New Orleans City R. R. Co. for which this company is entitled to draw its own bonds.	217,500 00
Materials and supplies.	74,506 52
Current assets.	1,981,991 49
Deferred assets.	35,155 55
Leasehold equity accrued for retiring bonds of the New Orleans City R. R. Co.—under lease.	50,086 00
Total assets.	\$46,493,667 58
Liabilities.	
Capital Stock:	
Common.	\$30,000,000 00
Preferred.	10,000,000 00
Total capital stock.	\$40,000,000 00
Funded debt.	13,623,000 00
Current liabilities.	2,863,793 04
Profit and loss—surplus.	6,874 54
Total liabilities.	\$46,493,667 58

Statements of income account of the properties for the years ending December 31, 1903, 1904 and 1905:

NEW ORLEANS RAILWAY & LIGHT CO. AND AFFILIATED COMPANIES. (Including receivership period January 1-July 15, 1905.)

CONSOLIDATED AND CONDENSED STATEMENT OF INCOME AND SURPLUS FOR YEAR ENDING DECEMBER 31, 1905.	
Gross earnings.	\$5,039,352 01
Operating expenses.	2,674,862 97
Net earnings.	\$2,364,489 04
Other income.	81,751 00
Gross income.	\$2,446,240 04
Deductions from income:	
Taxes and licenses.	\$416,000 12
Interest on loans.	80,701 22
Miscellaneous.	25,056 58
Total deductions.	\$521,757 92
Net income before deducting fixed charges.	\$1,924,482 12
Fixed Charges:	
Interest on bonds.	\$647,177 09
Interest on 4½ per cent. bonds.	607,047 37
Dividends on underlying and interest on bonds not owned.	27,459 06
Salary and expense funds.	4,000 00
Total fixed charges.	\$1,285,683 51
Surplus from operation.	\$638,801 61

Deductions from surplus:	
1½ per cent. dividend on Railway & Light Co. preferred stock.	\$125,000 00
Undivided surplus of underlying companies.	778 41
Total deductions from surplus.	\$125,778 41
Net surplus.	\$513,023 20

NEW ORLEANS RAILWAYS CO. AND AFFILIATED COMPANIES.

CONSOLIDATED AND CONDENSED STATEMENT OF INCOME AND SURPLUS FOR THE YEARS ENDED DECEMBER 31, 1903, and 1904.

	1903.	1904.
Gross earnings.	\$4,294,567 13	\$4,629,892 96
Operating expenses.	2,357,886 37	2,494,947 65
Net earnings.	\$1,936,680 76	\$2,144,945 31
Other income.	29,036 58	21,515 79
Gross income.	\$1,965,717 34	\$2,166,461 10
Deduction from income:		
Taxes and licenses.	\$383,296 91	\$388,593 23
Interest on loans.	30,368 91	109,268 84
Other.	18,728 26	27,327 85
Total.	\$432,394 08	\$525,189 92
Net income before deducting fixed charges.	\$1,533,323 26	\$1,641,271 18

CONSOLIDATED AND CONDENSED STATEMENT OF INCOME AND SURPLUS FOR FOUR MONTHS ENDING APRIL 30, 1906.

	1905.	1906.
Gross earnings.	\$1,981,909 30	
Operating expenses.	1,018,101 60	
Net earnings.	\$963,807 70	
Fixed charges:		
Interest on underlying bonds, loans and miscellaneous.	\$341,844 41	
Interest on 4½ per cent. bonds.	204,645 00	
Taxes and licenses (subsidiary companies).	147,972 67	
Taxes and licenses, Railway & Light Co.	2,296 21	
Total fixed charges.	\$696,758 29	
Net income.	\$267,049 41	
Other deductions:		
Dividends and proportion of surplus on securities not owned.	\$6,350 70	
Miscellaneous.	5,187 68	
Total other deductions.	11,538 38	
Surplus from operation.	\$255,511 03	

The following are statements of income account for years 1903 to 1905, inclusive, of the subsidiary companies of the New Orleans Railway & Light Co.:

NEW ORLEANS & CARROLLTON R. R., LIGHT & POWER CO.

	1903.	1904.	1905.
Gross earnings.	\$1,559,181 78	\$1,608,861 70	\$1,803,629 06
Operating expenses.	801,511 05	830,280 99	696,396 09
Net earnings.	\$757,670 73	\$778,580 71	\$1,107,232 97
Other income.	5,099 06	4,580 94	16,064 12
Taxes, interest, rentals and miscellaneous expenses.	\$762,769 79	\$843,163 65	\$924,297 09
	431,158 22	442,078 94	451,614 92
Dividends.	\$331,611 57	\$401,084 71	
	330,000 00	330,000 00	
Net surplus.	\$1,611 57	\$71,084 71	\$472,682 17

NEW ORLEANS LIGHTING CO.

	1903.	1904.	1905.
Gross earnings.	\$631,715 80	\$687,932 60	\$745,600 89
Operating expenses.	256,037 85	312,762 69	314,915 79
Net earnings.	\$375,677 95	\$375,169 91	\$430,685 10
Other income.	4,396 73	10,719 03	16,336 25
Taxes, interest, rentals and miscellaneous expenses.	\$379,974 68	\$385,888 94	\$447,021 35
	381,543 09	402,186 26	405,304 33
Net deficit.	\$1,568 41	\$16,297 32	
Net surplus.		\$341,717 02	

ST. CHARLES STREET R. R. CO.

	1903.	1904.	1905.
Gross earnings.	\$349,125 98	\$283,515 75	\$411,579 61
Operating expenses.	215,941 21	227,265 23	235,440 16
Net earnings.	\$133,184 77	\$156,250 52	\$176,139 45
Other income.	336 94		4,684 84
Taxes, interest and miscellaneous expenses.	\$133,531 71		\$180,824 29
	44,287 82	47,350 06	52,496 28
Dividends.	\$89,243 89	\$109,060 46	
	57,198 00	57,198 00	
Net surplus.	\$32,045 89	\$51,862 46	\$128,328 01

ORLEANS R. R. CO.

	1903.	1904.	1905.
Gross earnings.	\$121,284 11	\$129,701 80	\$139,711 40
Operating expenses.	84,475 63	83,973 45	86,706 87
Net earnings.	\$36,808 48	\$45,728 35	\$53,004 53
Other income.	2,538 77	1,794 49	1,856 13
Taxes, interest and miscellaneous expenses.	\$39,347 25	\$47,582 84	\$54,860 66
	35,345 69	36,018 13	36,426 79
Net surplus.	\$4,001 56	\$11,564 71	\$18,433 87

NEW ORLEANS & PONTCHARTRAIN R. R. CO.

	1904.	1905.
Gross earnings.	\$15,207 50	\$15,051 30
Operating expenses.	22,225 74	22,239 37
Deficit.	\$7,018 24	\$7,188 07
Other income.		2 75
Taxes and interest.	\$7,018 24	\$7,185 32
	3,489 63	4,087 06
Net deficit.	\$10,507 27	\$11,272 38

The principal office is No. 317 Baronne street, in the city of New Orleans, La.

The directors are E. C. Foster, R. M. Walmesley, Pearl Wright, George A. Hero, William Adler, Hugh McClosky, F. B. Hayne, Joseph H. De Grange, A. Brittin, Maurice Stern, W. R. Stauffer, T. H. McCarthy, Albert Baldwin, all of New Orleans, La.; John W. Barr, Louisville, Ky.; A. M. Younge, New York, N. Y. The officers are: President, E. C. Foster; first vice-president, R. M. Walmesley; second vice-president and secretary, Jos. H. De Grange; third vice-president, A. S. Gibbs; treasurer, H. A. Ferrandou.

The annual meeting is the second Monday in April. Fiscal year ends December 31 of each year.

The transfer agent in New York of the stock is the New York Trust Co., No. 24 Broad street. Said company is also transfer agent of the bonds. The registrar in New York of the stock is the Morion Trust Co. of 38 Nassau street. The transfer agent in New Orleans of the preferred and common stock is the Whitney Central National Bank. The registrar in New Orleans of the preferred and common stock is the Hibernia Bank & Trust Co.

NEW ORLEANS RAILWAY & LIGHT CO.

By E. C. FOSTER, President.

The Committee on Stock List recommends that the above-described \$13,643,000 general mortgage 4½ per cent. coupon bonds of 1905, for \$1000 each, Nos. 1 to 13,357, inclusive, 14,886 to 14,987, inclusive, 14,992 to 15,000, inclusive, 27,851 to 28,000, inclusive, and 28,101 to 29,125, inclusive, \$10,000,000 5 per cent. non-cumulative preferred stock and \$20,000,000 common stock be admitted to the list.

WM. W. HEATON, Chairman.

GEORGE W. ELY, Secretary.

Adopted by the Governing Committee June 13, 1906.

[Continued from Page 738.]

National Marine Bank.....	30	38	40
National Mechanics' Bank.....	10	26	27½
National Union Bank of Md.....	100	115	118
Old Town Bank.....	10	10½	...

Trust, Fidelity and Casualty Stocks.			
Colonial Trust.....	50	27	...
Continental Trust.....	50	...	197
Fidelity & Deposit.....	50	134	140
Maryland Casualty.....	25	55½	...
Maryland Trust.....	100	...	...
Maryland Trust Pref.....	100	130	...
Title Guar. & Trust.....	100	...	128
Union Trust.....	50	53½	59

Miscellaneous Stocks.			
Ala. Con. Coal & Iron Pref.....	100	89	91
Consol. Cotton Duck Common.....	50	11¼	...
Consol. Cotton Duck Pref.....	50	32	35
Consolidated Gas, E. L. & P. 100	35	40½	...
Consol. Gas, E. L. & P. Pref.....	100	83	87
Consolidation Coal.....	100	90	...
G. B. & S. Brewing Co.....	100	9½	10½
George's Creek Coal.....	100	78	...

Railroad Bonds.			
Atlanta & Charlotte 1st 7s, 1907.....	101	...	...
Atlan. Coast Line 1st Con. 4s, 1952.....	99½	99¾	...
Atlantic Coast Line 4s, Cfs., 1952.....	92	...	...
Atlantic Coast Line (Conn.) 4s.....	110	111	...
Atlantic Coast Line (Conn.) 4s.....	90	92	...
Carolina Central 4s, 1949.....	115½	115¾	...
Char., Col. & Aug. 1st 5s, 1910.....	110	...	...
Char., Col. & Aug. 2d 7s, 1910.....	110	...	...
Coal & Iron Railway 5s, 1920.....	105½	106	...
Columbia & Greenville 1st 6s, 1916.....	111	114½	...
Florida Southern 4s, 1940.....	94½	95½	...
Georgia & Alabama 5s, 1945.....	109½	110	...
Georgia, Car. & North. 1st 5s, 1929.....	119	119½	...
Georgia Pacific 1st 6s, 1922.....	119	119½	...
Georgia South. & Fla. 1st 5s, 1945.....	110½	111	...
Louisville & Nashville 4s.....	101	...	...
Maryland & Pennsylvania 4s, 1951.....	94½	95	...
Norfolk & Carolina 5s, 1933.....	112	118	...
Petersburg, Class A 5s, 1926.....	111	114	...
Petersburg, Class B 6s, 1926.....	125	...	...
Piedmont & Cum. 1st 5s, 1911.....	103	...	...
Potomac Valley 1st 5s, 1941.....	113	...	...
Raleigh & Augusta 1st 6s, 1926.....	122½	124	...
Richmond & Danville Gold 6s, 1915.....	111½	112½	...
Seaboard Air Line 4s, 1950.....	87	87½	...
Seaboard Air Line 5s, 10-year, 1911.....	101½	102	...
Silver Springs, Ocala & Gulf 4s, 1918.....	96	97½	...
South Bound 5s, 1941.....	110	113	...
Southern Railway Con. 5s, 1994.....	116	...	...
Virginia Midland 2d 6s, 1911.....	106	...	...
Virginia Midland 3d 6s, 1916.....	114	...	...
Virginia Midland 4th 3-4-5s, 1921.....	110	...	...
Virginia Midland 5th 5s, 1926.....	111	...	...
Western Maryland new 4s, 1952.....	85	85¾	...
West. North Carolina Con. 5s, 1914.....	111½	112	...
West Virginia Central 1st 6s, 1911.....	106	107	...
Wilmington & Wel. Gold 5s, 1925.....	115	115½	...

Street Railway Bonds.			
Atlanta Con. St. Ry. 5s.....	104½	105¼	...
Baltimore Traction 1st 5s, 1929.....	114½	116	...
Central Ry. Con. 5s (Balt.), 1932.....	110	...	...
Charleston City Railway 5s, 1923.....	105½	106¾	...
Charleston Con. Electric 5s, 1969.....	55	96	...
City & Suburban 5s (Balt.), 1922.....	112½	...	...
City & Suburban 5s (Wash.), 1948.....	105½	...	...
Lexington Railway 1st 5s, 1949.....	101	101½	...
Manon Rwy. & Lt. Con. 5s, 1953.....	98	100	...
Metropolitan 5s (Wash.), 1911.....	114	112	...
Newport News & Old Pt. 5s, 1939.....	99	100	...
Norfolk Railway & Light 5s.....	99½	99½	...
Norfolk Street Railway 5s, 1944.....	110½	...	...
North Baltimore 5s, 1942.....	117½	120	...
Richmond Traction 5s.....	104	...	...
United Railways 1st 4s, 1949.....	92½	92½	...
United Railways Inc. 4s, 1949.....	73½	...	...

Miscellaneous Bonds.			
Alabama Consol. Coal & Iron 5s.....	94	...	...
Baltimore Electric Power 5s.....	85	...	...
Consolidated Gas 5s, 1910.....	104½	...	...
Consolidated Gas 5s, 1939.....	110½	...	...
Consolidated Gas 4½s, Cfs., 1952.....	96	...	...
G. B. & S. Brewing 1st 3-4s.....	62	62½	...
G. B. & S. Brewing 2d Income.....	37½	38	...
Maryland Telephone 5s.....	96	...	...
Mt. V. & Woodby's Cot. Duck 5s.....	85½	86½	...
United Elec. Light & Power 4½s.....	95	95½	...

SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for Week Ending July 9.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.).....	85	91
Aiken Mfg. Co. (S. C.).....	105	105
Anderson Cotton Mills (S. C.).....	125	125
Arkwright Mills (S. C.).....	80	85
Augusta Factory (Ga.).....	105	110
Avondale Mills (Ala.).....	107	110
Belton Mills (S. C.).....	107	110
Bilb Mfg. Co. (Ga.).....	122	122
Brandon Mills (S. C.).....	112	120
Cabarrus Cot. Mills (N. C.) new.....	120	130
Chadwick Mfg. Co. (N. C.) Pfd.....	102	102
Chiquola Mfg. Co. (S. C.).....	95½	95½
Clifton Mfg. Co. (S. C.).....	125	125
Clifton Mfg. Co. (S. C.) Pfd.....	99	100
Clinton Cotton Mills (S. C.).....	138	145
Columbus Mfg. Co. (Ga.).....	96	101
Courtenay Mfg. Co. (S. C.).....	109	109
Dallas Mfg. Co. (Ala.).....	92	95
Darlington Mfg. Co. (S. C.).....	64	64
Eagle & Phenix Mills (Ga.).....	129	130
Enoree Mfg. Co. (S. C.).....	85	85
Enoree Mfg. Co. (S. C.) Pfd.....	102	102
Enterprise Mfg. Co. (Ga.).....	86	92
Exposition Cotton Mills (Ga.).....	200	200
Gaffney Mfg. Co. (S. C.).....	90	92
Gainesville Cotton Mills (Ga.).....	29	40
Granby Cot. Mills (S. C.) 1st Pfd.....	59	64
Granville Mfg. Co. (S. C.).....	160	165
Greenwood Cotton Mills (S. C.).....	112	115
Grendel Mills (S. C.).....	112	113
Henrietta Mills (N. C.).....	200	200
King Mfg. Co. John P. Co. (S. C.).....	97	103
Lancaster Cotton Mills (S. C.).....	99	104
Lancaster Cot. Mills (S. C.) Pfd.....	98	98
Langley Mfg. Co. (S. C.).....	92	96
Laurens Cotton Mills (S. C.).....	172	173
Limestone Mills (S. C.).....	115	115
Lockhart Mills (S. C.).....	100	102
Lockhart Mills (S. C.) Pfd.....	97	100
Louise Mills (N. C.).....	90	94
Louise Mills (N. C.) Pfd.....	102	102
Marlboro Cotton Mills (S. C.).....	73	81
Mayo Mills (N. C.).....	165	185
Mills Mfg. Co. (S. C.).....	105	110
Mills Mfg. Co. (S. C.) Pfd.....	100	100
Monaghan Mills (S. C.).....	100	100
Monarch Cotton Mills (S. C.).....	90	93
Newberry Cotton Mills (S. C.).....	114	120
Norris Cotton Mills (S. C.).....	115	115
Odell Mfg. Co. (N. C.).....	88	88

Olympia Cot. Mills (S. C.) Pfd.....	80	...
Orangeburg Mfg. Co. (S. C.) Pfd.....	80	97
Orr Cotton Mills (S. C.).....	105	105
Pacolet Mfg. Co. (S. C.).....	185	200
Pacolet Mfg. Co. (S. C.) Pfd.....	100	104
Pelzer Mfg. Co. (S. C.).....	170	175
Piedmont Mfg. Co. (S. C.).....	171	177
Poe Mfg. Co. (S. C.).....	125	125
Richland Cot. Mills (S. C.) Pfd.....	51	56
Raleigh Cotton Mills (N. C.).....	99	105
Saxon Mills (S. C.).....	100	105
Sibley Mfg. Co. (Ga.).....	64	68
Southern Cotton Mills (N. C.).....	88	88
Spartan Mills (S. C.).....	145	151
Springsteen Mills (S. C.).....	100	100
Trion Mfg. Co. (Ga.).....	142	142
Tuconau Mills (S. C.).....	164	164
Victor Mfg. Co. (S. C.).....	115	117
Warren Mfg. Co. (S. C.).....	97	100
Warren Mfg. Co. (S. C.) Pfd.....	105	107
Washington Mills (Va.).....	22	26
Washington Mills (Va.) Pfd.....	100	115
Whitney Mfg. Co. (S. C.).....	145	150
Wiscasset Mills (N. C.).....	122	135
Woodruff Cotton Mills (S. C.).....	106	106

Quotations Furnished by William S. Glenn, Broker, Spartanburg, S. C., for Week Ending July 9.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.).....	85	91
Aetna Cotton Mills (S. C.) Pfd.....	70	70
Aiken Mfg. Co. (S. C.).....	83	89
American Spinning Co. (S. C.).....	118	118
Anderson Cotton Mills (S. C.).....	100	105
Aradilla Mills (S. C.).....	89	93
Arkwright Cotton Mills (S. C.).....	124	124
Augusta Factory (Ga.).....	80	85
Avondale Mills (Ala.).....	100	100
Belton Mills (S. C.).....	105	105
Bilb Mfg. Co. (Ga.).....	115	115
Brandon Mills (S. C.).....	115	120
Bronze Mills (S. C.).....	77	80
Cabarrus Cotton Mills (N. C.).....	120	120
Chadwick Mfg. Co. (N. C.) Pfd.....	103	103
Chiquola Mfg. Co. (S. C.).....	92	96
Clifton Mfg. Co. (S. C.).....	122	126
Clifton Mfg. Co. (S. C.) Pfd.....	103	103
Clinton Cotton Mills (S. C.).....	140	145
Columbus Mfg. Co. (Ga.).....	94	97
Courtenay Mfg. Co. (S. C.).....	97	102
Dallas Mfg. Co. (S. C.).....	89	95
Darlington Mfg. Co. (S. C.).....	64	64
D. E. Converse Co. (S. C.).....	115	115
Eagle & Phenix Mills (Ga.).....	120	120
Enoree Mfg. Co. (S. C.).....	83	88
Enoree Mfg. Co. (S. C.) Pfd.....	103	103
Enterprise Mfg. Co. (Ga.).....	86	92
Exposition Cotton Mills (Ga.).....	174	200
Gaffney Mfg. Co. (S. C.).....	90	93
Gainesville Cotton Mills (Ga.).....	35	35
Glenwood Mills (S. C.) Cotton.....	100	105
Gluck Mills (S. C.).....	92	97
Granby Cot. Mills (S. C.) 1st Pfd.....	50	50
Granville Mfg. Co. (S. C.).....	157	157
Greenwood Cotton Mills (S. C.).....	112	112
Grendel Mills (S. C.).....	200	200
Henrietta Mills (N. C.).....	200	200
Imman Mills (S. C.).....	93	97
King Mfg. Co. J. P. (Ga.).....	97	103
Lancaster Cotton Mills (S. C.).....	100	106
Lancaster Cot. Mills (S. C.) Pfd.....	95	99
Langley Mfg. Co. (S. C.).....	92	96
Laurens Mills (S. C.).....	167	167
Limestone Mills (S. C.).....	102	102
Lockhart Mills (S. C.) Pfd.....	97	101
Loray Cotton Mills (N. C.) Pfd.....	87	92
Louise Mills (S. C.).....	94	94
Louise Mills (N. C.) Pfd.....	102	102
Marlboro Cotton Mills (S. C.).....	84	84
Mayo Mills (N. C.).....	150	200
Mills Mfg. Co. (S. C.).....	100	100
Mills Mfg. Co. (S. C.) Pfd.....	99	101
Monaghan Mills (S. C.).....	97	101
Monarch Cotton Mills (S. C.).....	87	87
Newberry Cotton Mills (S. C.).....	115	115
Ninety-Six Cotton Mills (S. C.).....	92	97
Norris Cotton Mills (S. C.).....	106	106
Odell Mfg. Co. (N. C.).....	90	90
Orangeburg Mfg. Co. (S. C.) Pfd.....	80	80
Orr Cotton Mills (S. C.).....	100	106
Pacolet Mfg. Co. (S. C.).....	180	180
Pacolet Mfg. Co. (S. C.) Pfd.....	102	104
Pelzer Mfg. Co. (S. C.).....	165	173
Piedmont Mfg. Co. (S. C.).....	167	175
Poe Mfg. Co. F. W. (S. C.).....	122	130
Raleigh Cotton Mills (N. C.).....	100	100
Richland Cot. Mills (S. C.) Pfd.....	50	50
Roanoke Mills (N. C.).....	118	118
Saxon Mills (S. C.).....	101	104
Sibley Mfg. Co. (S. C.).....	68	68
Southern Cotton Mills (N. C.).....	142	150
Spartan Mills (S. C.).....	142	150
Springsteen Mills (S. C.).....	100	100
Trion Mfg. Co. (Ga.).....	122	140
Tuconau Mills (S. C.).....	160	160
Victor Mfg. Co. (S. C.).....	115	115
Warren Mfg. Co. (S. C.).....	95	102
Warren Mfg. Co. (S. C.) Pfd.....	107	107
Washington Mills (Va.).....	22	26
Washington Mills (Va.) Pfd.....	100	115
Whitney Mfg. Co. (S. C.).....	145	150
Wiscasset Mills (N. C.).....	119	125
Woodruff Cotton Mills (S. C.).....	105	107

New Orleans Railways Statement.

The New Orleans Railway & Light Co., E. C. Foster, president, in making application to the New York Stock Exchange for listing \$13,643,000 of 4½ per cent. general mortgage bonds, \$10,000,000 of 5 per cent. non-cumulative preferred stock and \$20,000,000 of common stock, showed that dividends of 1¼ per cent. each were paid for the quarters ended December 31, 1905, and March 31, 1906, on all of the preferred stock. The statement of income and surplus for the year ended December 31 last shows gross earnings, \$5,039,352; operating expenses, \$2,674,862; net earnings, \$2,364,489; gross income, \$2,446,240. After the payment of taxes, interest (including fixed charges), dividends, etc., there was left a surplus from operation amounting to \$638,801.

After the deduction of a 1¼ per cent. dividend on the preferred stock, amounting to \$125,000, and undivided surplus of underlying companies, there was left a net surplus of \$513,023. For the first four months of 1906 the gross earnings were \$1,981,909; the operating expenses were \$1,018,101; net earnings, \$963,807. After the payment of taxes and interest, licenses, dividends, etc., there was left a surplus from operation of \$355,511. The total assets of the company are \$46,493,667. It has about 190 miles of track, and extensions of about four miles are contemplated. About 500 cars are operated. Besides its electric plants it also has a gas plant, and it now supplies all the gas, electric lighting and street railway service in the city of New Orleans.

New Corporations.

Mr. Louis Walters is reported to be establishing a bank at Skidmore, Texas. The City National Bank of Houston, Texas, has begun business. Carey Shaw is cashier. The Burleson Realty & Trust Co. of Waco, Texas, has been incorporated with \$20,000 capital by R. A. Burleson, B. H. Hill and E. E. Cammack.

The B. F. Pool Investment Co. of North Birmingham, Ala., capital \$10,000, has been incorporated by B. F. Pool, A. M. Pool and William Kamplain.

The Travelers' Investment Co. is reported organized at Oklahoma City, O. T., with \$25,000 capital. I. M. Holcomb is said to be the principal promoter.

The Bank of Cave City, Ark., has filed articles of incorporation; capital \$10,000. The directors are J. A. Laman, G. W. Brewer, C. W. Laman and F. W. Brewer.

The Bank of Cane Hill at Cane Hill, Ark., has been incorporated with \$20,000 capital by J. S. Edmiston, W. H. Buchanan, A. S. Moore, C. Brewster and A. R. Carroll.

The Lawton National Bank of Lawton, O. T., has been approved; capital \$50,000. The organizers are T. H. Dunn, A. E. Long, P. F. Benbow, G. A. Horton and A. E. Hammonds.

The First National Bank of Arlington, Ga., has been approved; capital \$30,000. The organizers are W. E. Saunders, H. M. Calhoun, B. H. Askew, J. W. Calhoun and J. B. Loftan.

The First National Bank of Ocilla, Ga., capital \$50,000, has been approved. The organizers are William Henderson, W. N. Smith, J. A. J. Henderson, W. M. Harris and W. M. Cleall.

The Gary National Bank, at Gary, W. Va., capital \$25,000, has been approved. The organizers are F. E. Clifford, E. O. Toole, Howard N. Evenson, J. D. Teery and R. V. Shanklin.

The First National Bank of Maud, O. T., capital \$25,000, has been organized with the following officers: P. H. Cooper, president; E. H. Bond, cashier; A. L. Rippey, assistant cashier.

The Eureka Building & Loan Co. of Charleston, S. C., capital \$120,000, has been granted a charter. The incorporators are M. F. Kennedy, W. M. Jacobs, R. E. Martin and John L. Roddy.

The Cotton Bank of Rowesville, S. C., has been chartered with \$15,000 capital. The officers are V. P. Shuler, president; J. C. Funches, vice-president, and J. H. Moore, secretary and treasurer.

The Exchange National Bank of Montgomery, Ala., has been authorized to begin business with \$300,000 capital. Michael Cody is president; Jos. Norwood, vice-president, and Sylvain Baum, cashier.

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